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The influence of received pronunciation
on a west Cumbrian speaker of English
provincial standard


by

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A B S T R A C T

This is a study of the influence of received pronunciation on a speaker from Workington, Cumberland. His speech is described as occupying a position between received pronunciation and the more conservative Workington speech norm. In this regard he is contrasted with a second Workington man, of identical background, and their status as typical Workington speakers is established by means of a questionnaire.

Attention is limited to differing phonetic realisations of the same vowel phonemes, noted impressionistically and supported by accompanying acoustic analysis. Exemplification is provided by a tape-recording of the same passage spoken by the two informants with a transcription of the passage showing linguistic innovation.

The process of change is observed both within the confines of the structural patterning of the idiolect under investigation and the wider linguistic context of the community in which it is spoken.

Simultaneous with the presentation of the material the discussion of different theoretical frameworks within which various statements in the field of dialect studies have been made, serves to compare their relative merits and summarize current trends of thought.

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CHAPTER ONE

INTRODUCTION

Previous work on the dialect of Cumberland would seem to fall into two kinds: amateur pursuits, written by the layman for the layman, and more scholarly investigations, undertaken by professional linguists¹.

Among the former are included collections of songs and ballads, short stories and rhymes, published in book form, periodicals or the local press. The material covers not only fiction, but documents prevalent manners and customs². The more serious publications range from histories to glossaries of words and phrases which make valuable additions to records of dialect vocabulary.

The latter investigations are either bibliographical in nature, or grammars of individual dialects or form part

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1. See Bibliography on Cumbrian Dialect, page 113
 2. In the first volume of the Journal of the Lakeland Dialect Society, Cockermouth, 1939, the editor comments: "One of our hopes is that our Society will be able to gather together a library of books with a Lakeland interest, in any branch of literature - dialect, history, poetry, folklore and superstition".

of dialect surveys conducted at the national level. There are only two grammars of individual dialects, viz. of Lorton, 1913, and Penrith, 1927. The three national surveys are The English Dialect Dictionary, Oxford, 1898 together with The English Dialect Grammar, Oxford, 1905, both edited by Joseph Wright, and the more recent Survey of English Dialects conducted at the University of Leeds and the Survey of Scottish Dialects at the University of Edinburgh.

The motivating force behind these surveys was the preservation of dialects threatened by extinction. Already in 1905 Joseph Wright wrote in his preface to The English Dialect Grammar:

"There can be no doubt that pure dialect speech is rapidly disappearing even in country districts, owing to the spread of education and to modern facilities for inter communication. The writing of this grammar was begun none too soon, for had it been delayed another twenty years I believe it would by then be quite impossible to get together sufficient pure dialect material to enable anyone to give even a mere outline of the phonology of our dialects as they existed at the close of the nineteenth century".

The same philosophy could be said to guide the two later surveys. Volume 1, part 3 of the Survey of English Dialects appeared in 1963, containing responses to the questionnaire from six localities in Cumberland, viz: Longtown, Abbeytown, Brigham, Threlkeld, Hunsonby and Gosforth, but results of the Scottish Survey still await publication.

However the growth of industrial centres had led to a decline in rural dialect speakers¹ and old speech habits are being levelled in a way which has received relatively little attention from linguists. Instead of the heterogeneous collection of rural dialects, each with comparatively few speakers, new, relatively homogeneous dialect blocks with large numbers of speakers are chrystallising, their limits being set by the evolving social and economic structure of the new communities. Linguistic research to-date has concentrated more on the study of divergence, but it would seem that as the world

1. Already in 1900 3/4 of the population of England lived in towns and in 1951 less than 4% of our workers were employed in agriculture. Census 1951. One per cent sample table. Pt.1. H.M.S.O. London, 1955.

becomes ever smaller, the resultant widening of social contacts at all levels will breed linguistic convergence.

In an urban setting dialectal usage could impede communication, so it is usually abandoned in favour of the standard language. But what exactly does this strengthening of the standard language entail? Certainly the standard will not be uniform throughout the country, because the phonetic and phonological aspects of the native dialect will usually be preserved, whereas lexical items can be more easily replaced and syntactic irregularities excluded. Owing to the particular situation obtaining in England¹ there is already a unifying influence exercised by the so-called 'received pronunciation', or R.P., a regionally neutral variety of English, originally based on the speech of the upper class, which carries great prestige.

It would seem however that the status of R.P. vis-à-vis other dialects of English has changed somewhat during the

1. M.A.K. Halliday, A. McIntosh and P. Strevens, The Linguistic Sciences and Language Teaching. London, 1964. Pages 85-86.

last thirty years. For example the B.B.C. now has announcers who speak with regional accents, a fundamental change from original policy. Heads of powerful industrial concerns and university professors interviewed on radio or T.V. may speak with a regional accent which proves the possible dispensability of R.P. for personal advancement. This does not mean that R.P. has lost prestige, but rather that the regional dialects no longer carry quite the same social stigma as before. Perhaps the change in social attitude could best be illustrated as follows: thirty years ago a speaker of regional dialect with professional aspirations had no option other than to acquire R.P., and probably spoke both varieties of English, i.e. the old and the acquired, in a bi-lingual type of situation, whereas today the same person would merely approximate his speech to a greater or lesser extent in the direction of R.P. because of its prestige value. This approximation in the direction of R.P. which would inevitably entail differing realisations of the same phoneme within one and the same idiolect, on the part of speakers with widely differing backgrounds could

perhaps prove to be one of the most interesting linguistic phenomena of the twentieth century¹.

In this study the extent of R.P.^{am} influence on a West-Cumbrian speaker of provincial standard is examined. This contrasts sharply with other previous works: instead of capturing disappearing dialect my interest lies in establishing what is taking its place. Direct R.P. influence is exercised almost exclusively by the mass communication media which are still predominantly R.P. or R.P. orientated. Any approximation to R.P.^{am} has to be described with regard to such factors as the structural patterning of the speaker's own original dialect and the degree to which he identifies himself with his own speech community. My purpose is to examine how socially

1. In accordance with his theory of the spread and consolidation of language changes E.H. Sturtevant in his Introduction to Linguistic Science. Yale University Press, 1947. 214. pointed out that, "before a phoneme can spread from word to word it is necessary that one of the two rivals shall acquire some sort of prestige. Most commonly, or at least in most recorded cases, it is a standard dialect which causes one phoneme to be preferred to another".

determined change proceeds within the confines of an idiolect.

According to Martinet,

"it remains to be emphasized that linguistic diversity¹ begins next door, nay, at home and within one and the same man"²

and in regard to sound change Hoenigswald further suggests that,

"close range, minute investigations of idiolects and subdialects, of population movement, bilingualism and conscious and unconscious attitudes towards bilingualism are among the studies needed to know more - but such studies are few and far between even for contemporary language communities ..."³

-
1. The use of the word diversity should cause no confusion in a study of linguistic convergence, for what appears in the vertical dimension as convergence within the pyramid structure of English dialects will appear as diversity on the horizontal plane (see footnote 1, page 11)
 2. U. Weinreich, Languages in Contact. New York, 1953. Preface, page vii.
 3. H.M. Hoenigswald, Language Change and Linguistic Reconstruction. Chicago, 1960. Page 59.

CHAPTER TWO

PROCEDURAL DETAIL & INFORMANT DATA

I chose Workington, Cumberland, as a suitable place to undertake the above-mentioned investigation for a variety of reasons. Firstly, as a native of Workington, where I lived until my early twenties, I have maintained contact with school friends and members of my family on whose goodwill and co-operation I could rely, and from whom I could solicit the relevant data under conditions of total informality, a highly desirable situation for the field worker. Secondly, and especially with regard to the factors mentioned previously, Workington is singularly appropriate for this project because of the following historical, geographical, economic and social considerations.

Lying on the border between England and Scotland, the area known as present-day Cumberland continually changed hands as the result of constant warfare until the union of England and Scotland. This can be seen today in the old parish churches which have towers strongly fortified for purposes of defence, presumably where the civilian population took refuge. In 573 A.D. this region was consolidated with the kingdom of Strathclyde, in Scotland,

which maintained a separate existence until the tenth century. In 875 A.D. the kingdom of Cumbri is referred to, but without any indication of its extent, and the first mention of Cumberland to denote a geographical area occurred in 945 A.D.¹ What is of interest here is the name of Cumberland. Cumber is cognate with cymru, the Welsh word for Wales. The indigenous inhabitants of present-day England² spoke Celtic dialects, belonging to the Brythonic group, and through the centuries they were driven back by successive waves of invaders towards the west coast, during which process they were split up into three groups: the most southerly group in Cornwall, a middle group in Wales and a northerly group south of the Clyde and Forth. The Brythons of the kingdom Strathclyde, referred to above, retained their speech into the twelfth century. Brythonic numerals presumably survived into modern times among shepherds in Cumberland and other northern counties, although for all other purposes English

1. See Encyclopedia Britannica, Cambridge University Press, 1910, under Cumberland.

2. I am not concerned here with the Goidelic Celtic dialects of Ireland, Scotland and the Isle of Man.

was standard¹. Therefore English as a first language apparently came to be used comparatively late.

Cumberland, the northernmost county on the west coast of England, lies between the Pennines and the Irish Sea. Workington, on the coast, is in a relatively inaccessible part of England as the main lines of communication pass by to the east, running northwards between the Cumberland mountains and the Pennines via Carlisle, the county town, to Scotland. The only swift and efficient approach route to Workington is by train to Carlisle and then on south-westwards by local bus or train services. It is possible to come by road from the south from Westmorland, but the motorway stops before Kendal, so the remainder of the journey is very slow as the road winds its way through

1. See Encyclopedia Britannica, Cambridge University Press, 1910, under Celt.

When I was a child my mother who was brought up on a farm in the Pennine foothills, taught me how my great-grandfather used to count sheep in Celtic as they passed by him into the fold. On a recent visit to Cumberland in 1969 I asked my grand uncle to count for me, which he could do with ease, although he no longer had occasion to do so. It would seem that few of the younger generation know it, and then passively. With the death of the old generation it will soon be forgotten.

MAPS TO SHOW:-

1/.

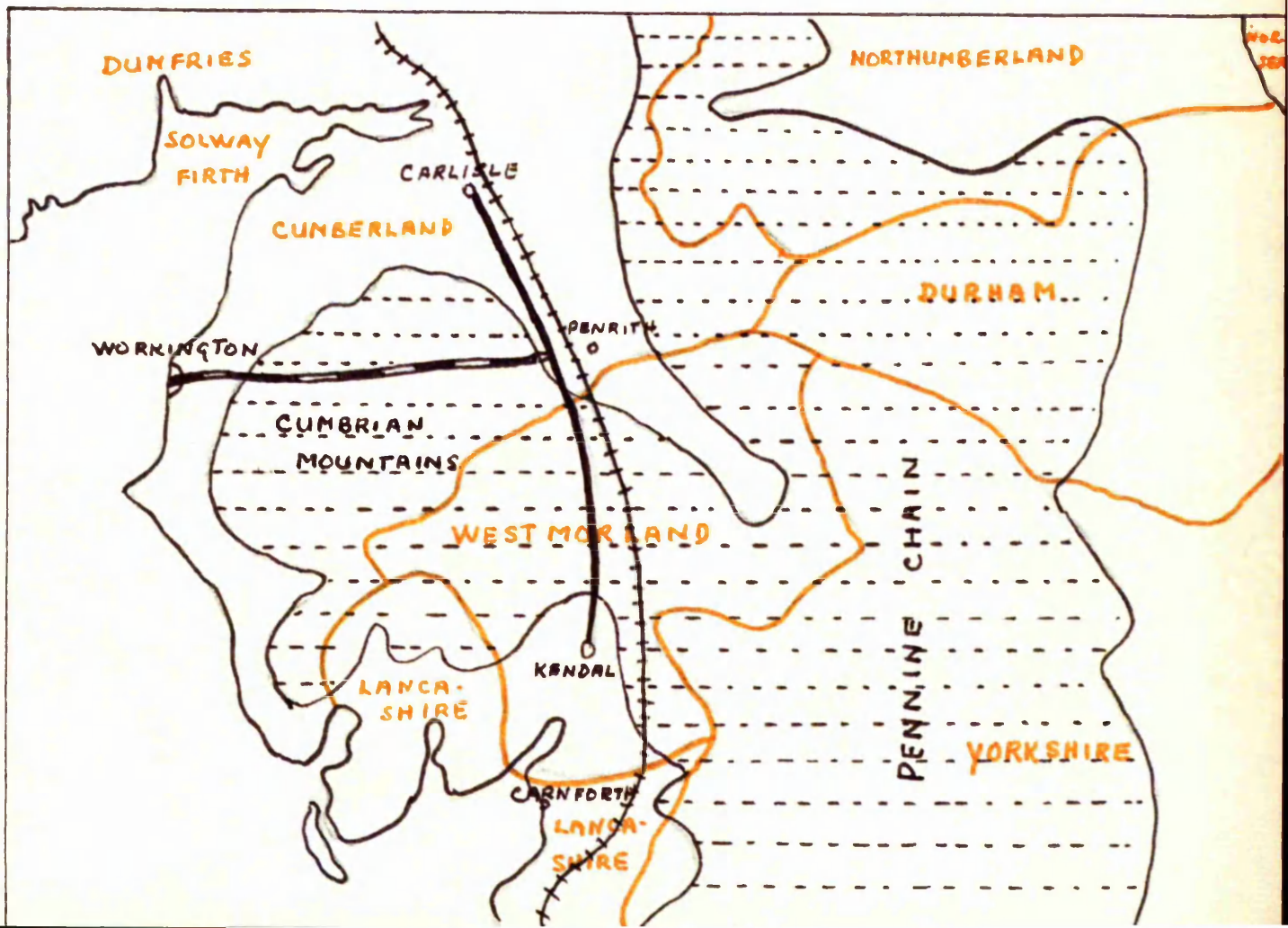


1. RELATIVE POSITION OF
WORKINGTON & CUMBERLAND
IN THE BRITISH ISLES.

2. CUMBERLAND :-
COMMUNICATIONS &
NEIGHBOURING COUNTIES.

1/.

RAILWAY ++++++
COUNTY BOUNDARIES ————
MOTORWAY (under construction) ==
MOTORWAY (proposed) - - - -



the Lake District and down across the undulating coastal plain to the sea. Conversely by changing onto a slow train at Carnforth one can follow the coastline northwards to Workington, but it is a very time-consuming journey and trains do not run every day. Geographically Workington is isolated because of the lack of good communications. This creates in turn economic problems.

Inland the population is engaged in farming, especially sheep-farming. On the coast the discovery of coal, the opening of many small coalmines in the late nineteenth century and the subsequent building of the iron and steel works in Workington brought a wave of prosperity which reached its peak during the second world war. But economically this part of England has suffered much depression, and currently the government is trying to attract more industry and capital investment by extending the motorway from Kendal to Carlisle and building a new one from Penrith to Workington which would solve the transportation problem outlined above. However with the present decline in demand for coal and the closure of smaller pits, coupled with the re-organisation of the steel industry at national level, the future of the iron

and steel works is uncertain. The younger generation feels very insecure, as even now industry would not mean many more jobs because of the high level of automation, so employment prospects are comparatively poor. Of my contemporaries who went to university, few return home, and then mostly to teach. Socially speaking it is obvious that the young people feel attracted by big-city life and find the pace at home too slow. The mass communication media can only serve to emphasise this difference. It is an area from which the more enterprising young members of the community move to seek better opportunities elsewhere, conversely an area where very few people come to settle. Population mobility is uni-directional which in turn reflects the extremely narrow range of vertical mobility to be exploited.

The population of Workington receives relatively little new blood. Because of the movement away the element which stays is essentially the more conservative section of the community. There is comparatively little vertical mobility and correspondingly less class consciousness than would be the case in big cities. Contact with outsiders is minimal so that there is a lack

of opportunity to meet other people¹. Of the forces mentioned previously universal education and the mass communication media exact the strongest influence. Educational statistics show that the proportion of pupils staying on at school to take A level examinations is much lower in the north than in the south of England, whereas the proportion of students at Colleges of Further Education is higher². In a certain number of cases this lack of premium set on academic success could be attributed to parental indifference³. The mass media on the other hand play a similar role to that obtaining elsewhere in Britain, and probably the cultural isolation of many communities gives them an importance which they may not enjoy in more urbanized areas. Understandably the extent of outside

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1. Supporters of local football teams follow their progress with great enthusiasm, but trips to other parts are usually taken in closed groups, and even if efforts are made to communicate with strangers, they would be of very brief duration.
 2. See a recent Ministry report, Statistics for Education 1968 vol. 1 Schools, discussed in the Times Educational Supplement 17.10.69. Pg. 3.
 3. Of the 120 pupils in my year at Workington Grammar School (65 girls, 55 boys), 7 went to university and I was the only girl among them.

influence in Workington is comparatively small: penetration of new ideas is hindered by geographical and social factors, which should not be taken to mean that the younger generation is insensitive to these inhibiting factors, indeed that is the root cause of present frustration. In these respects then linguistic interference also should be present only to a limited degree.

In December 1968 I received a large selection of tape-recordings from Workington made under varying circumstances, ranging from serious private discussion to conversations around the tea-table. The process of isolating my main informant made the choice of my uncle inevitable as the factors in his favour were overwhelming. He was the oldest member of the family and had lived in Workington, except for active service in the Great War, all his life, whereas some of the younger members, like myself, had spent considerable periods elsewhere. Also his speech showed a type of random variation which was not present to the same extent in the speech of his daughter who had spent about fifteen years outside Workington, in such cities as London, Durham and Burton-on-Trent.

As it was the standard practice of the dialect survey conducted in this country to look for informants generally over sixty¹, permanently domiciled at home, mostly men, as men apparently speak dialect more consistently than women, I felt doubly justified in my selection.

Even as a child I had been aware of the fact that my uncle, henceforth referred to as W 1, spoke a little differently from his brothers, including my father, and he had, as I would have expressed it then, "improved" his speech by modifying some of the features which characterise most closely the speech of Workington. However since retirement this particular quality had receded somewhat, because the particular conditioning features, made relevant and emphasized by his professional activities, had ceased to operate.

The inconsistency, or random variation referred to previously, present in W 1's speech, was highlighted by

1. Orton & Dieth, Survey of English Dialects: Introduction. Leeds, 1962. Chapter 1.5.

a direct comparison with a second informant, henceforth called W2, chosen because of the greater degree of uniformity characterising his speech.

W1 and W2 are both in their early seventies, have lived in Workington all their lives, were employed at the iron & steel works until retirement, W1 then holding the position of Welfare Officer for the works and W2 that of foreman in the large maintenance engineering shop. Their educational background is identical: both left school at fifteen before taking any examinations in order to earn, as times were hard then, W1 going as an apprentice metallurgist into the laboratory, and W2 as an apprentice fitter and turner.

At this point the following criticism could be levelled, i.e. that I had selected two speakers who were unrepresentative of the Workington population as a whole or whose speech was idiosyncratic. In order to give my hypothesis authority and the resultant conclusions validity I formulated a questionnaire which was completed in the following establishments: The Girls' Comprehensive School, the Boys' Comprehensive School, the Grammar School and the West

Cumberland College of Technology, all in Workington.

The purpose of the questionnaire was as follows:

(a) to identify both speakers equally as native to Workington, (b) nevertheless to distinguish the speech of W 1 and W 2 because they "sounded different", and (c) to assess W 1 as being a less typical Workington speaker than W 2. I recorded a three minute sequence from each informant, made quite independently, consisting of a spontaneous description of a local event. On the basis of this which was played twice, once at the beginning and once at the end, the population answered the very simple questions. The whole took about half-an-hour. The age range covered the years 13 - 70 and fully represented a cross section of the community as far as socio-economic classes are concerned: the Grammar School sixth form being mostly lower and upper middle class, the day-release boys from the College of Technology mostly working class and the Comprehensive School all classes. Assessment ranked W 1 as being less typical than W 2, a fact, clarified by the questionnaire, which was not rationalised as being a difference of age or educational background.

Here follows a copy of the questionnaire with an accompanying commentary, evaluating the relative rating of the individual questions.

1. Do these speakers sound like Workington people?

1. Do these speakers sound like Workington people?

1st Speaker

2nd Speaker

☐ Yes

☐ Yes

☐ No

☐ No

2. If not, where do you think they were born? (Near here, e.g. Whitehaven or Maryport, or a long way from Workington, e.g. Newcastle or Manchester.)

1st Speaker _____

2nd Speaker _____

3. Which of the following words describe their way of speaking best?

Mark one word for each line across, (a), (b), (c), (d).

1st Speaker

(a) Is his pronunciation:

☐ sloppy
☐ slovenly

☐ rather
☐ careless

☐ careful

☐ over
☐ precise

(b) Is his grammar:

☐ incorrect

☐ few
mistakes

☐ normal

☐ unnatural

(c) Was what he said:

— unclear — clear, com- — very — affected
prehensible clear "posh"

(d) Is he:

— ignorant — ordinary — educated — giving himself
airs, "swanky"

2nd Speaker

identical questions.

4. What sort of a job do you think they have?

1st Speaker

— Teacher, lawyer, doctor
 — Shopkeeper, clerk
 — Factory worker, labourer

2nd Speaker

— Teacher, lawyer, doctor
— Shopkeeper clerk
— Factory worker, labourer

5. How old do you think they are? (Under or over 50)

1st Speaker _____

2nd Speaker _____

6. Judged as Workington speakers, how would you describe them?

- ☐ Very typical
- ☐ Not so typical
- ☐ Not like a Workington speaker at all

- ☐ Very typical
- ☐ Not so typical
- ☐ Not like a Workington speaker at all

7. Which of the two speakers sounds more like a Workington person?

- ☐ 1st Speaker
- ☐ 2nd Speaker
- ☐ Both the same

8. Does anything strike you about their speech?

1st Speaker _____

2nd Speaker _____

Of primary importance was question 7, essentially an elaboration of question 1, the results forming the basic division for the statistical breakdown which constitutes appendix A. Question 6 was second in importance, indicating the relative degree of typicality of W1 and W2. Questions 2, 4 and 5 allowed for possible differences in birth place, social background and age respectively. Question 3 ensured that both informants were normal speakers without outstanding deficiencies or merits. Question 8 was a deliberately open-ended question in order to permit special comments drawing attention to factors which may otherwise have been overlooked. As such, it turned out to be non-productive.

As my original taped material was confined to informal conversation I extended the scope of my investigations to include other contextual styles. This I did by compiling lists of minimal pairs to procure citation forms and asking my informants to read passages of their own choice. I thus covered what Labov terms spontaneous and casual speech, careful speech and reading style¹. This measure was taken in order to observe the extent of register influence on the variables which were to prove worthy of scrutiny.

Before any discussion of the difference between the speech of W 1 and W 2 it would be profitable to discuss what they have in common, because that would immediately delimit the area meriting attention. Both W 1 and W 2 speak standard English, as defined by Bloomfield². In transformational

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1. W. Labov, The Social Stratification of English in New York City, Washington, 1966, Chapter 4.
 2. L. Bloomfield, Language. New York, 1933, Chapter 3.5, p.48.
 "The standard forms are used in school, in church and in all discourse that officially concerns the whole community, as in law-courts and legislative assemblies. All our writing (except by way of jest) is based on the standard forms, and these forms are registered in grammars and dictionaries and presented in text books to foreigners who want to learn our language."

terms the output of the syntactic component would be the same as for R.P., whereas the output of the phonological component would show some degree of divergency. Their intonation tunes show no marked difference from each other. The same holds for consonants, although W 1 has an affricated /k/ which I would like to call idiosyncratic. It is the question of vowel differences which is complicated, hence interesting.

Within the wider framework of comparing W 1 and W 2 on one hand with R.P. on the other, grammatical considerations would provide no grounds for discussion. Lexicological analysis would reveal a few words in the vocabularies of W 1 and W 2 which have a limited local distribution, but these can be ignored¹. Pitch variation can also be eliminated because it is probably that feature of speech which is least open to outside interference. For example small children learning tone languages appear to master the tone first, before the other phonological features of

1. e.g. beck (stream), lal (little), parp (fuss), fistle (fidget), laup (jump).

the words involved¹. Intonation patterns, once learnt, are very difficult to change, and the foreigner whose English is perfect in every other way, may yet betray his origin by using the underlying tunes of his native language. Certain different realisations of consonantal phonemes are evident, e.g. W1 and W2 give little aspiration to plosives; /t/ and /s/ are dental and /θ/ is realised with the tongue far forward between the teeth; clear and dark /l/ have a different distribution. But emphasis throughout the following exposition will be concentrated solely on vowel variation, simply because it is the field which provides the greatest number of observable divergencies and furnishes the necessary evidence upon which certain predictions can be made.

A further delimitation of the field of analysis is that vowels will be studied in stressed position only (so that weak forms are not included in the exposition). As the vowel phonemes of W1 and W2 will be subjected to

-
1. The three year old child of a Chinese colleague always uses the right tone, even if the consonants or vowels are wrong. Similarly the mother understands what her daughter wants to say primarily on the basis of the tone used.

spectrographic analysis in a later chapter this necessitates a further restriction to closed syllables. Since vowel formants are bent in a specific manner characteristic of the surrounding consonants, they can only be profitably compared where the environment is constant¹, hence the insistence on closed syllables so that both long and short vowels can be accommodated within the same framework. Vowels in the environment /-l/ will be excluded because of the strong velarizing influence of the on-glide onto the [l] articulation. The so-called 'centering' diphthongs will be omitted from the investigation because they do not manifest any marked difference from R.P.

1. H.A. Gleason. An Introduction to Descriptive Linguistics. New York, 1967. Chapter 22.15 & 16.

CHAPTER THREE

THEORETICAL IMPLICATIONS

In order to establish a theoretical framework within which to present my material most economically and adequately it is my intention to delineate the main trends of thought reflected in recent work in dialect studies which to-date have not been assembled in one place, so that the relevancy of new theoretical insights both to the general theory and to my own data will become apparent.

Traditional dialectology, by that I mean the famous surveys conducted in France, Germany, the United States, England and Switzerland,¹ by its essentially atomistic approach does not convey an integrated view of the system of which each item forms a part². Attention would seem to have been increasingly focused on individual lexical items as such, although they were originally merely the

1. S. Pop, La dialectologie. Louvain, 1950, pp. 1-155, 737-761, 914-923.

H. Orton & E. Dieth, Survey of English Dialects: Introduction. Leeds, 1962, etc.

R. Hoßzenköcherle, Einführung in den Sprachatlas der deutschen Schweiz. Bern, 1962.

2. The same emphasis is to be observed in the methodology established by the ~~first historical~~ linguists for the classification of sound changes.
nineteenth century

'samples' to function as the framework within which sound correspondences and grammatical features were noted. Their variation in distribution and phonetic realisation was geographically presented by the drawing of isoglosses, but as each map could often handle only a few items at a time this had the limiting effect of deflecting interest from the general to the particular. Contrary to expectation the proliferation of isoglosses, instead of reflecting relative consistency and furnishing support for assumed dialect boundaries presented a continuum where any out-off point between dialects has to be justified by the greater importance of one isogloss over many others which involves the relative weighting of one item against another, a further and even more complicated issue which can only be decided in the final analysis in terms of convenience¹. Much of this difficulty of interpretation is to be related to the essentially phonetic nature of the items noted: as mentioned above, the framework is non-structural, therefore non-phonemic. It would seem fruitful however to abstract those features characteristic of major or kernel areas as opposed to so-called areas

1. P. Ivić tries to provide a corrective to this, see Proceedings of 9th ICL, 1964: Structure and typology of dialect differentiation, pp. 115-121.

of transition separating them. Furthermore although other concomitant factors were adduced to explain dialectal variation, e.g. historical and geographical considerations, such as previous political units later dissolved or consolidated, or physical barriers such as mountain ranges or rivers, class dialects received little or no attention.

In contrast to the French and German surveys dialect studies in English selected only a certain section of the population, i.e. ageing speakers in rural areas, and as such are invaluable in capturing and preserving speech habits threatened by greater mobility and present technological advances. Consequently the data collected is unrepresentative of the bulk of the population¹. What has taken and will take the place of these highly diversified speech forms? Exactly how will they change or be levelled? How far can they in fact change? How far can the concept of a standard language become a

-
1. G.R. Pickford, Word 12, 1956: American linguistic geography: a methodological appraisal, pp. 211-233.
J.T. Wright, Zeitschrift für Mundartforschung 33, 1966: Urban dialects: a consideration of method, pp. 232-247.

physical reality? First there are certain theoretical questions to be examined, which have relevance to dialect studies in general and particularly to the concepts of language and dialect, synchrony and diachrony, linguistic description, explanation and prediction.

The collection of facts implies a taxonomic approach which establishes internal relationships and this in turn excludes certain peripheral facts because the field under investigation has been delimited, see for example those linguists in the past who regarded semantics and phonetics as lying outside linguistics proper¹. Although it is the main interest of the scholar which initially narrows down the facts he chooses to examine, the subsequent data still has to be subjected to some form of "conventional

-
1. According to Bloomfield meaning is to be used only as an heuristic device in the establishing of phonemes, any deeper discussion of it is relegated to the realm of psychology, explained on the basis of Watsonian behaviourism. See L. Bloomfield, Language. New York, 1933. Chapter 5.

According to de Saussure language is to be studied scientifically only if we dispense with speech. See F. de Saussure, Cours de linguistique générale. Geneva, 1915.

simplification"¹ in order to expedite the next stage of analysis which would be purely interpretive. In any case certain abstractions have been made from the data which allow for categorical statement. Such abstractions in dialectology are inter alia the terms language and dialect.

Language is generally considered to be a more embracing term than dialect for we say that a language has perhaps four main dialects, but never the reverse. In fact in many cases the two terms may have the same signifié, e.g. the Scandinavian languages (Norwegian, Swedish and Danish) exhibit such a close genealogical relationship that ^{they} could be classed as dialects; on the other hand the so-called dialects of Chinese are better termed languages, because in their spoken form they are mutually unintelligible. Languages are usually

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1. I use this expression in the same sense as F.P. Dinneen, An Introduction to General Linguistics. New York, 1967. Page 198: "... we must abstract from some of the undenied concrete properties of the things a science studies in order to have a precisely definable object".

spoken in viable political units whose society may have a long history of literacy, so, despite their relative intercomprehensibility, the different Scandinavian languages maintain their independence from one another by different orthographies and works of literature¹.

Whereas in the case of the Chinese dialects their official lack of independent status reflects the wish to stress the political unity of the diverse population. The case of English is complicated by our colonial past which has resulted in English being spoken in many different parts of the world, both as a first and second language, and each area has its own particular brand of English. What then is the English language, if not an abstraction made for purposes of establishing its unique properties vis-à-vis those of other languages? Yet, in practice, it is a

1. R.H. Robins, General Linguistics An Introductory Survey. Indiana, 1964. 2.2.4.

collection of various dialects, each with certain individual features and with varying degrees of prestige. It would appear that both linguistic and non-linguistic criteria play a role in the use of the word language: a strictly linguistic definition is based on the degree of mutual intelligibility¹ (see English as defined above); otherwise political autonomy and literary tradition may serve either to override this factor (e.g. the Scandinavian languages) or render it irrelevant (the Chinese dialects).

The factors involved in establishing the exact use of the word language apply equally to the word dialect. Attention has merely moved from the macroscopic to the microscopic plane without leaving the problem behind. In this case moreover there are no relevant political or literary factors to lend support to a definition. Dialect is not written simply because there is no need². The

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1. C.F. Voegelin & Z.S. Harris, Proceedings of the American Philosophical Society 95, 1951, pp. 322-329: Methods for determining intelligibility among dialects of natural languages.
 2. This statement is based primarily on a recent conversation with a friend from Zürich. In contemporary Switzerland in the areas where the German dialects are very diverse, school instruction, commerce and government are conducted in High German. As there is no need to commit the dialect to writing, rules have not been formulated.

only non-linguistic index along which dialect can be evaluated is that of social prestige¹ which would be essentially a subjective assessment, therefore unreliable, and also at variance depending on whose opinion is solicited². As the discussion above of isoglosses indicated the difficulty, if not impossibility of isolating different dialects, how and where should the desirable 'conventional simplification' of the data be carried out? This introduces the next point of discussion: the relationship of synchrony and diachrony in regard to dialectology.

The basic autonomy of synchronic studies as opposed to the traditional diachronic approach was first specifically established by de Saussure³, and the new, non-historical concept of état de langue gave birth to structural linguistics in the modern sense. While the first historical

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1. G.N. Putnam & E.M. O'Hern, Supplement to Language 31, 1955, language dissertation number 53: The status significance of an isolated urban dialect.
 2. Review of above article by R. Evans in Language 32, 1956, pp. 822-825.
 3. F. de Saussure, Cours de linguistique générale. Geneva, 1915. Part 1, 3. 4-9.

linguists, such as Bopp and Rask, were not unconcerned with structure¹; especially since certain comprehensive descriptions of états de langue already existed², their interest was focused on the "underlying" structure into which the Indo-European languages could be integrated by reason of their similarities³, whereas their differences which clearly marked off one self-contained structure from another, were considered secondary. Synchronic deficiencies in a certain language may even have served to justify the isolation of those forms whose history was well documented in all languages under study. De Saussure's insistence on keeping separate the two frameworks of reference to avoid illogical argument had the unfortunate consequences of obscuring - at least for some time - the fact that although the two approaches were different, the data examined was essentially the same, indeed he even made them

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1. F. Bopp, Über das Conjugationssystem der Sanskritsprache in Vergleichung mit jedem der Griechischen, Lateinischen, Persischen und Germanischen Sprache. Paris, 1816. /n
 2. e.g. Sanskrit, Greek and Latin written among others by Panini, Appollonius Dyscolus and Priscian respectively. See F.P. Dinneen, An Introduction to General Linguistics. New York, 1967. Pages 311, 95, 114.
 3. W.P. Lehmann, Historical Linguistics: An Introduction. New York, 1962. Chapter 5.3.

more different than they were by denying the adequacy of structural methods in the diachrony.

Traditional dialectology in my previous comment on page 35 was linked to historical linguistics because their methodologies had much in common. Initially dialect geography served as a small-scale test-case and corrective to the latter, as facts from the contemporary scene were relevant in as much as they confirmed or questioned those principles of historical processes already established. It drew attention to various social phenomena such as cultural borrowing, popular etymology and homonymic clash as disturbing the 'normal' functioning of the sound laws. That linguistic change could be most profitably understood by a simultaneous account of both diachronic and synchronic factors was recognised already in 1926¹, the first surveys locating so-called 'relic' areas where older speech forms were attested, in this respect representing an earlier stage of the languages.

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1. E.C. Roedder, Germanic Review 1, 1926: Linguistic Geography, pp. 281-308. "The manner in which phonetic changes expand over a region is still a subject of great uncertainty, and can be studied only in the living language, i.e. in our case in the dialect, and here alone can we hope to gain safe criteria to infer the past history of sounds from present day observations".

To view change in retrospect, as is implicit in the work of the first historical linguists, led to a superficial impression of uniformity. This is best seen in Schleicher's genealogical tree which represented diagrammatically the relationships between the members of the Indo-European family of languages. Any cross section of the tree would show languages as being discrete units, and common change in two related languages could only be explained by tracing the two branches back to the same node, even when geographical factors made this impossible. This oversimplified model was subsequently superceded by Schmidt's more flexible wave theory¹.

The work of the Neogrammarians established historical linguistics as an autonomous discipline. As language change was explained by the formulation of sound laws which operated mechanically, a huge amount of data was collected to illustrate conclusively their blind nature: the presence of so-called 'exceptions' had to be resolved

1. L. Bloomfield, Language. New York, 1933. Pages 311, 314.

by further research¹. But this main emphasis on exhaustive documentation shifted in the course of the present century to include other related aspects, especially in light of de Saussure's teaching. As Martinet observes²:

"In the opinion of structural diachronicists, structural linguistics should afford not only a relevant principle for the classification of linguistic changes but also a total or partial explanation of these changes".

The phoneme concept which implies conscious recognition of differences by the native speaker questions the older thesis of the blindness of the sound laws against which the individual was powerless, and opens the door to a broader understanding of change which has as its basis the individual or groups of individuals³.

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1. For example Verner's law accounted for various discrepancies unresolved by Grimm's law. See L. Bloomfield, Language. New York, 1933. Chapter 29.8.
 2. Anthropology Today, ed. A.L. Kroeber. Chicago, 1953. A. Martinet: Structural Linguistics. Page 585.
 3. This is the basic hypothesis of chapter 7, E. Sapir, Language. New York, 1921

As Vogt states¹:

"At any moment, between the initiation and the conclusion of these changes, we have a state characterised by the presence of more or less free variants, so that the speakers have the choice between alternative expressions. In each case the choice will be determined by an interplay of factors, some linguistic, some aesthetic and social ... What therefore in the history of a linguistic system appears as a change will in a synchronic description appear as a more or less free variation between different forms of expression, equally admissible within the system ... It is important to stress this aspect of systems because without admitting a fair latitude of variation within a system, it is difficult to see how structures could change at all ... For the study of linguistic interference

1. H. Vogt, Word 10, 1954: Language Contacts, pp. 365-374.

phenomena affecting the system, this aspect is particularly important ..."

As Lyons remarks, it is impossible to draw a sharp line between historical change and synchronic variation¹. At any point in time language changes are taking place, but so slowly that speakers are usually unaware of them².

Although initially work in dialectology was diachronically based (see footnote, page 44), I used the word synchronic to refer to the data collected, because the facts had been assembled at a given point in time. However they were not fully synchronic in the Saussurean sense of being elements in a linguistic structure, defined on the basis of their mutual interdependence in a network of

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1. J. Lyons, Introduction to Theoretical Linguistics. Cambridge, 1968. Page 50.
 2. For example: (I) R. Reichstein Word 16, 1960: *Etude des variations sociales et géographiques des faits linguistiques*, pp. 55-99. Here the degree of merger of /*ẽ*/ and /*œ*/ among other factors is discussed in relationship to Parisian French. (II) A.C. Gimson in An Introduction to the Pronunciation of English. London, 1962, pp. 133-135, discusses the present monophthongisation of R.P. /*aie*/ and /*ouə*/ to /*a:*/ and /*ɑ:*/ respectively, e.g. /*ta:*/ tyre and /*ta:*/ tower

relationships. The data remained essentially fragmentary, the description incomplete. It seems strange that the structural approach to language in synchronic studies should have been espoused so enthusiastically by students of linguistics, especially with regard to specific languages, yet some forty years had to elapse before dialect studies on a comparative basis were considered afresh in the light of de Saussure's teaching. Items had to be related to one another, so that for example each of their phonetic exponents could achieve a specifiable status when compared with all other units of the same system, but what theoretical framework could accommodate them most economically, precisely and exhaustively?

The taxonomic approach of pre-Chomskian analysis which is essentially the item and arrangement procedure, lists the phonemes, stating their incidence in shared lexical sets separately for each pair of dialects. In this way sets of correspondences may be established in

a system of bi-level identification¹. Or would it be more convenient to postulate abstract underlying representations and generate the correspondences by a set of ordered rules displaying relationships at various points between the deep and surface structures² ? The choice is between separate inventory and incidence presentations, using conventional symbols of an immutable nature, or introducing abstract symbols which will be mapped by the grammar into the synchronic relationships reflected in the different surface structures. The generative approach has the further inherent property that, because the rules are not limited to a finite corpus, they apply also to potential utterances and are in that sense predictive.

A further remark, particularly in reference to the mutual interdependence of diachronic and synchronic

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1. A.R. Thomas, Verhandlungen des Zweiten Internationalen Dialektologenkongresses 2, 1968: Generative phonology and the statement of morphophonemic variants in Welsh dialects, pp. 794-803.
 2. M. Halle, Word 18, 1962: Phonology in a generative grammar, pp. 54-72.

studies in dialectology, is that the item and arrangement approach need not include direct reference to historical facts, although these are the relevant criteria for the establishment of the lexical sets¹, whereas the ordered rules of the generative grammar may reflect attested historical processes², although for purposes of simplicity this is not always the case³. In this regard the generative approach would seem to reflect reality in a more faithful way. But it must not be forgotten that many generative studies seek to elucidate one particular aspect of linguistic structure and that the resultant concise statements, having an essentially restricted area, cannot be easily generalised to cover other concomitant

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1. But see R.E. Keller, T.P.S., 1966-7: Some problems of German Umgangssprache, pp. 88-106.
 2. S. Saporta, Language 41, 1965: Ordered rules, dialect differences and historical processes, pp. 218-224.
 3. A.R. Thomas, T.P.S., 1966-7: Generative phonology in dialectology, pp. 179-202.

features of the same language¹. Generative studies in dialectology have so far been confined to short articles of an exploratory nature², but this approach would appear to be a most promising and challenging field³.

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1. R.B. Lees, The Grammar of English Nominalisations. Bloomington, 1960.

M. Bierwisch, Grammatik des deutschen Verbs. Berlin 1965.

This would not apply to Chomsky and Halle's The Sound Pattern of English. New York, 1968, which although it does not claim to treat English phonological processes exhaustively (see the preface) nevertheless presents an over-all picture as a basis for future investigation.

2. W.A. O'Neil, Language 40, 1964: Faroese vowel morpho-phonemics, pp. 366-371.
3. See R.D. King, Historical Linguistics and Generative Grammar. New Jersey, 1969. Chapter 3.

CHAPTER FOUR

VOWEL PHONEMES OF R.P. and W.G.

A synchronic language description in Saussurean terms would involve a structure concept established solely by reference to the network of relationships obtaining within the language in question¹. Hence all language descriptions are individually unique, because their relevant taxonomic criteria are valid only for the particular language in question. De Sa^ussure maintained that because of this essential difference, items established within the structure of a particular language, or parts of its structure could not be compared with those of another². But this would render the otherwise useful concept of structure inflexible and of limited application because the means of comparing systems which reflect partial similarities are denied. In order to accommodate a comparison of partially similar systems, so essential for dialect studies, a more comprehensive abstract framework, called a diasystem is set up, within which the structural consequences of partial similarity

1. F. de Saussure, Cours de linguistique générale. Geneva, 1915. Introduction, chapter 5.

2. Ibid. Part 2, chapter 4, 2.

can be examined¹. This presupposes a structural analysis of each dialect to be included in the diasystem and entails careful consideration of the phonetic nature of the units, the actual exponents of the different systems.

While de Saussure stressed the structural implications of associations, oppositions and functions², external considerations, embodied in the relationships holding between the units made a precise description of each unit, based on internal criteria unnecessary, as his example from chess shows. In this respect the first dialectologists and de Saussure stood in a dichotomous relationship, the former studying the unit without the system and the latter the system without the units. Obviously the two - the abstract framework and the concrete manifestations of its elements - can be analysed simultaneously, i.e. phonological analysis (as opposed to phonetic description alone for example.)

1. U. Weinreich, Word 10, 1954: Is a structural dialectology possible?, pp. 385-400.

2. F. de Saussure, Ibid, Part 2, chapter 5.

The level of phonology represents a 'conventional simplification' of the data in the sense already defined¹, as all the infinite number of sounds present in the utterances of language are allotted to a definite and limited set of phonemes contrastive in at least some environments.² From the gross phonetic properties of language those segments are abstracted which are indispensable for descriptive analysis. In 1930 Martinet called phonology functional phonetics.

Following the history of phonemic theory in the United States³ it is clear that no other approach to linguistic description (e.g. prosodic analysis and transformational grammar) has been able to attain the same degree of comprehensiveness and simplicity in orthographic

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1. F.P. Dineen, An Introduction to General Linguistics. New York, 1967. Page 198.
 2. G.L. Trager & H.L. Smith, Outline of English Structure, Studies in Linguistics occasional paper 3, Norman, Oklahoma, 1951 provides a very succinct summary of phonemic analysis as applied to English.
 3. C.F. Hockett, A Course in Modern Linguistics. New York, 1958. Chapters 2-6, 10-13.

representation¹. Prosodic analysis and transformational grammar are both disinterested in simple surface notation, the former because of its polysystemic approach and the latter because of its interest in deep structure which finds its ultimate expression in a lexicon specified in distinctive feature matrices. Within its self-imposed restrictions the phoneme theory is invaluable for purposes of data presentation, as long as its limitations are not forgotten.

What are therefore these limitations? Any abstraction per se gives precedence to certain relevant features on which its independent status is recognised, and this simultaneously implies the non-relevancy or redundancy of other concomitant features. These 'subsidiary' features remain unspecified in the notation. However broad transcriptions are usually accompanied by a convention listing allophonic variations².

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1. K.L. Pike, Phonemics: a Technique for Reducing Languages to Writing. Ann Arbor, 1947.
 2. This is the method used in The Principles of the International Phonetic Association.

Accepting then, provisionally this framework of analysis a diasystem is established to relate R.P. vowels and those generally used by speakers in Workington, henceforth symbolised as W.G.¹. On the model of Weinreich² the following comparison of R.P. and W.G. is made:

R.P., W.G.	<div> <div>R.P. /i: ~ i/</div> <div>W.G. /i ~ i: ~ e:/</div> </div>	≈	<div> <div>R.P. /e ~ æ ~ ʌ/</div> <div>W.G. /e ~ ə ~ a:/</div> </div>
≈ ə: ≈	<div> <div>R.P. /ɑ: ~ ɒ/</div> <div>W.G. /ɒ ~ ɒ:/</div> </div>	≈ ɔ: ≈	<div> <div>R.P. /u ~ u: /</div> <div>W.G. /u: ~ u/</div> </div>
≈	<div> <div>R.P. /ai ~ ei/</div> <div>W.G. ai</div> </div>	≈ oi ≈	<div> <div>R.P. /au ~ ou/</div> <div>W.G. au</div> </div>

Examples to illustrate the above are, reading from left to right:

1. The vowels noted in each case are present in the speech of those who would consider themselves linguistically as being neither conservative nor progressive to the point of affectation. W.G. vowels are based on my knowledge as a W. speaker and the R.P. vowels are those described by A.C. Gimson (An Introduction to the Pronunciation of English, of London, 1962) as general R.P., excluding the conservative and advanced varieties.
2. U. Weinreich, Word 10, 1954. Is a structural dialectology possible?, pp. 385-400.

R.P. head, bid, bed, bad, bud, bird, barred, 'bod',
bored, book, booed, bide, bayed, boil, bowed, bode.

W.G. bid, bead, bayed, bed, bad, barred, bird, 'bod',
bored, bode, booed, bud, bide, boil, bowed.

Such a phonetically determined comparison of equivalents within the two systems specifies in no way the sound correspondences which hold between the dialects and reflect their genealogical relationship. This method of analysis could be used to describe unrelated languages also, and as such belongs to the realm of language typology¹. However by taking into account correspondences on the basis of the quoted lexical items listed above we can amend the above diasystem thus:

R.P., W.G. // $i: \sim i \sim e \sim \frac{R.P. \text{æ}}{W.G. \text{a}} \sim \frac{R.P. \text{ɑ:}}{W.G. \text{a:}} \sim \text{ə:} \sim \text{ɒ} \sim \frac{R.P. \text{ɔ:}^2}{W.G. \text{ɔ:}} \sim$

$\frac{R.P. / \text{ʌ} \sim u /}{W.G. \text{u}} \sim u: \sim \text{ai} \sim \frac{R.P. \text{ei}}{W.G. \text{e:}} \sim \text{oi} \sim \text{au} \sim \frac{R.P. \text{ou}}{W.G. \text{o:}}$ //

1. W.G. Moulton, Word 16, 1960: The short vowel system of Northern Switzerland, pp. 155-182

E. Pulgram, Linguistics 4, 1964: Structural comparisons, diasystems and dialectology, pp. 66-82.

2. The symbol ɔ: of the diasystem on pg. 58 (exemplified in R.P. bored and W.G. boole) has been further split into ɔ: and o:, ɔ: being retained exclusively for R.P. bored and o: used for W.G. boole, to be paralleled with R.P. ow.

The following points deserve comment: (a) The R.P. distinction between /u/ and /ʌ/ has no counterpart in W.G., which is accounted for synchronically by this following conversion rule:

R.P. /u/ → W.G. /u/
 /ʌ/ →

This results in such W. homonyms as stud: stood; cud: could; putt: put¹.

(b) Further examination of a larger corpus of material reveals not only the presence of such correspondence as R.P. /ɑ:/ (e.g. /fɑ:m/) and W.G. /a:/ (e.g. /fa:m/, farm), R.P. /æ/ (e.g. /fæn/) and W.G. /a/ (e.g. /fan/, fan) which we would expect, but also R.P. /ɑ:/ (e.g. /lɑ:f/) and W.G. /a/ (e.g. /laf/, laugh). This shows that correspondences do not stand in a one to one relationship

1. Homophony may be avoided by compensatory lengthening, e.g.

R.P. buck /bʌk/ : R.P. book /buk/
W.G. buck /buk/ : W.G. book /bu:k/

R.P. rum /rʌm/ : R.P. room /rum/
W.G. rum /rum/ : W.G. room /ru:m/

Look at Luke's luck! R.P. luk at lu:ks lʌk,
W.G. lu:k at lu:ks luk.

This is based on my own observation as a native speaker.

to each other in respect to the units of each system. The particular distribution of the phonemes of a system in lexical items is known as incidence¹. The inventory is established by a commutation process (minimal pairs), incidence by comparison of cognate lexical sets, and together they can specify uniquely the correspondences holding between dialects at the phonological level. In his investigation of Swiss dialects² Moulton demonstrates how identical inventories are complicated when specified in terms of incidence: ~~On~~his two diasystem analyses of the dialects LU (Luzern) and AP (Appenzell) are however not mutually incompatible as they merely represent two ways of examining the same material³.

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1. P. Ivić, Verhandlungen des 2. Internationalen Dialektologenkongresses in Marburg, ed. L.E. Schmitt, 1967/68: Phonemic Differences and Re-write rules, pp. 407-412.
 2. Word 16, 1960: The Short Vowel Systems of Northern Switzerland. Page 176.
 3. In a later article R.E. Keller combines synchronic and diachronic factors within the same diasystem to give a very detailed description of Munich colloquial speech. T.P.S. 1966-7: Some Problems of German Umgangssprache, pp. 88-107.

The alternation of R.P. /ɑ:/ and W.G. /a/ cannot be inferred from the diasystem as it stands which is essentially synchronic: diachronic considerations however clarify the issue immediately.

The historical changes can perhaps be presented most economically in the following formula:

$$\begin{aligned} \text{R.P. /ɑ:/} &\rightarrow \text{W.G. /a:/} \left/ \begin{array}{c} \text{r(c)}^1 \\ \text{lc} \end{array} \right. \\ &\rightarrow \text{W.G. /a/} \end{aligned}$$

'r' and 'l' refer to present orthography which retains sounds in the spelling which have long since disappeared from speech, e.g. far, charm, half, palm. Because the question of incidence is not so complicated in this case the relevant factors identifying the correspondences can be represented in this modified diasystem:

$$\begin{array}{l} \text{P., W.G.} \left/ \begin{array}{l} \text{i:} \sim \text{i} \sim \text{e} \sim \frac{\text{R.P. } \text{æ}}{\text{W.G. } \text{a}_1} \approx \frac{\text{R.P. } \text{ɑ:}}{\text{W.G. } \text{/a}_2 \sim \text{a:/}} \approx \text{e:} \sim \text{ɒ} \approx \frac{\text{R.P. } \text{ɔ:}}{\text{W.G. } \text{ɒ:}} \\ \frac{\text{R.P. } \text{/ʌ} \sim \text{u/}}{\text{W.G. } \text{u}} \approx \text{u:} \sim \text{ai} \approx \frac{\text{R.P. } \text{ei}}{\text{W.G. } \text{e:}} \approx \text{oi} \sim \text{au} \approx \frac{\text{R.P. } \text{ou}}{\text{W.G. } \text{o:}} \end{array} \right. \end{array}$$

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1. This is based on the chief sources of R.P. /ɑ:/ A.C. Gimson, Introduction to the Pronunciation of English, London 1962, page 106.

where a_1 and a_2 stand for the identical reflexes of R.P. /æ/ and /ɑ:/ respectively. On the basis of variation in incidence the lexical sets are established which are known to be the products of attested historical processes¹.

This is as far as taxonomic phonemic presentation can go: it catalogues the items and states their arrangement². However greater specificity can be obtained by paying attention to phonic substance, excluded by de Saussure, excluded again by the abstract nature of the phoneme³, in a re-evaluation of the phoneme by describing it in reference to its own specific properties, instead of using it as an abstract unit in a system, the minimal segment of linguistic analysis.

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1. Stankiewicz, Word 13, 1957: On discreteness and continuity in structural dialectology, pp. 44-59: "Dialectology which has been one of our main sources of information on historical processes, reveals intimate connections between synchrony and diachrony".
 2. See also: H. Kucera, Word 11, 1955: The Phonemic Variations of Spoken Czech, pp. 575-602. J.C. Catford, T.P.S., 1957: Vowel systems of Scots dialects, pp. 107-117. J.J. Gumperz, Language 34, 1958: Phonological differences in three Hindi dialects, pp.212-224.
 3. W.F. Twadell, Language monograph 16, 1935: On defining the Phoneme: "Phoneme is meaningless: it is a negative and relational abstraction in the realms of de Saussure's language".

Since the Prague School were interested in more than transcription, their concept of the phoneme embraced a descriptive analysis of those very features which both relate phonemes to each other and simultaneously maintain distinctive oppositions¹. This interrelationship of phonemes was in fact a narrower application of Saussurean structuralism. For example /b/, /m/ and /p/ are related because of their labiality, /p/ /t/ and /k/ by their plosive nature, /m/, /n/ and /ŋ/ by nasality, whereas /p/ and /t/ are separated from /b/ and /d/ by the voice-voiceless distinction and /g/ and /k/ from /ɣ/ and /x/ by the plosive fricative distinction. In certain linguistic contexts, e.g. word final, these oppositions can be neutralised when the main distinctive feature does not apply as in tot /to:t/, Tod /to:t/ but Todes /to:dəs/². By the mid-thirties the theoretical advantages to be gained by an exhaustive and precise listing of phonemic components and their combinatorial potential were evident.

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1. J. Vachek, The Linguistic School of Prague, Indiana, 1966, pp. 57-58.
 2. The concept of neutralisation due to loss of distinctive feature oppositions is well exemplified in For Roman Jakobson, eds. Halle, Lunt et al. E. Stankiewicz: The Phonemic Patterns of the Polish Dialects, a study in structural dialectology. Similarly P. Garde, Word 17, 1961: Réflexions sur les différences phonétiques entre les langues slaves, pp. 34-62.

Phonemic inventories can be elaborated by setting up a distinctive feature matrix for each phoneme. Within this broader frame of reference continuity or closeness of relationship can be established, whereas strictly phonemic criteria would indicate merely discreteness¹. 'Diaphonic pairs'² can be compared according to the number of distinctive features they have in common. In the following diasystem I have used the accepted conventions to indicate high, mid, low, front, central, back, long, short, rounded and spread vowel qualities³.

high	[+ high]	front	[+ front]
mid	[- high - low]	centre	[- front - back]
low	[+ low]	back	[+ back]
long	[- short]	spread	[- round]
short	[+ short]	round	[+ round]

For ease of presentation and for reasons which will become evident later diphthongs have not been included.

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1. E. Stankiewicz, Word 13, 1957: On discreteness and continuity in structural dialectology, pp. 44-59.
 2. G.R. Cochrane, Word 15, 1959: The Australian English Vowels as a Diasystem, pp. 69-88.
 3. N. Chomsky and M. Halle, The Sound Pattern of English. New York, 1968. Part 4, chapter 7, 4, pages 307 and 309.

Distinctive feature matrix for vowels of R.P. & W.G.

		1		2		3		4
		<div> <div>+ high</div> <div>+ front</div> <div>- short</div> <div>- round</div> <div>i:</div> </div>	≈	<div> <div>+ high</div> <div>+ front</div> <div>+ short</div> <div>- round</div> <div>i</div> </div>	≈	<div> <div>- high</div> <div>- low</div> <div>+ front</div> <div>+ short</div> <div>- round</div> <div>e</div> </div>	≈	<div> <div>+ low</div> <div>+ front</div> <div>+ short</div> <div>- round</div> <div>æ/a</div> </div>
		5		6		7		
R.P.		<div> <div>+ low</div> <div>+ back</div> <div>- short</div> <div>- round</div> <div>a:</div> </div>		<div> <div>- high</div> <div>- low</div> <div>- front</div> <div>- back</div> <div>- short</div> <div>- round</div> <div>ə:</div> </div>		<div> <div>+ low</div> <div>+ back</div> <div>+ short</div> <div>- round</div> <div>ɒ</div> </div>		
W.G.		5A		5B				
		<div> <div>+ low</div> <div>+ front</div> <div>+ short</div> <div>- round</div> <div>a</div> </div>	~	<div> <div>+ low</div> <div>+ front</div> <div>- short</div> <div>- round</div> <div>a:</div> </div>	~	<div> <div>- high</div> <div>- low</div> <div>- front</div> <div>- back</div> <div>- short</div> <div>+ round</div> <div>ə:</div> </div>		
		8		9A		9B		10
		<div> <div>- high</div> <div>- low</div> <div>+ back</div> <div>- short</div> <div>+ round</div> <div>ɔ:</div> </div>	~	<div> <div>+ low</div> <div>- front</div> <div>- back</div> <div>+ short</div> <div>- round</div> <div>ʌ</div> </div>	~	<div> <div>+ high</div> <div>+ back</div> <div>+ short</div> <div>+ round</div> <div>u</div> </div>		<div> <div>+ high</div> <div>+ back</div> <div>- short</div> <div>+ round</div> <div>u:</div> </div>
		<div> <div>+ low</div> <div>+ back</div> <div>- short</div> <div>- round</div> <div>ɒ:</div> </div>		<div> <div>+ high</div> <div>+ back</div> <div>+ short</div> <div>+ round</div> <div>u</div> </div>				

Underlinings in columns 5, 6, 8 and 9 specify and relate the differences which separate R.P. and W.G. The following re-write rules highlight somewhat crudely, those modifications which a W.G. speaker would have to make in an attempt to change his speech habits in the direction of R.P.

I (columns 5 & 5B) e.g. W.G. /ba:d/, R.P. /ba:d/ (barred)

[+ front] → [+ back]

II (column 6) e.g. W.G. & R.P. /bɛ:d/ (bird)

[+ round] → [- round]

III (column 8) e.g. W.G. /bʊ:d/, R.P. /bo:d/ (bored)

[+ low] → [- high
- low]

[- round] → [+ round]

IV (columns 5 & 5A) e.g. W.G. /laf/, R.P. /la:f/ (laugh)

[+ front] → [+ back]

[+ short] → [- short]

V (columns 9 & 9A) e.g. W.G. /bud/, R.P. /bʌd/ (bud)

[+ high] → [+ low]

[+ back] → [- front
- back]

[+ round] → [- round]

The rules have been listed in order to reflect their increasing complexity and must therefore be differently

weighted according to the type (e.g. height and position v. length v. labiality) and number of features involved. On the basis of the above we should be able to predict with some accuracy those 'target areas' which present the greatest difficulty to a W.G. speaker and the type of variation to be expected. Using the simpler phonemic notation for W.G. as on page 59 the following diasystem for informants W1 and W2 where W2 speaks W.G. is set up.

$$\text{W2} \left/ \begin{array}{l} i: \sim i \sim e \sim \frac{W1 \ a_1 \sim Q}{W2 \ a_1, a_2} \sim \frac{W1 \ A}{W2 \ a:} \sim \varnothing: \sim \varnothing \sim \varnothing: \sim \frac{W1 \ U}{W2 \ u} \sim u: \end{array} \right/$$

A, Q and U represent areas of phonetic variation ranging from:

Q: [a] , [a[•]] , [a:]
 A: [a:] [a:]
 U: [u] .. [y] .. [ə[•]] .. [ə]

..... means 'and anywhere between'.

The phonetic differences are more clearly displayed in this tabular distinctive feature matrix of W1 and W2¹.

1. This is a deliberate modification of the original distinctive feature matrices which would not permit the specification

+ front
+ back

 (as for A).

Symbol		High	Low	Front	Back	Short	Round
W1	A	-	+	+	+	-	-
W2	a:	-	+	+	-	-	-
W1	ɑ	-	+	(+)	/+/-	(+) /-/-	-
W2	a ₂	-	+	+	-	+	-
W1	U	/+/- (-)	(-)	(-)	/+/- (-)	+	/+/- (-)
W2	u	+	-	-	+	+	+

for ɑ (), / / indicate almost total complementary distribution.
 for U (), / / indicate a tendency towards complementary distribution.

/A/ can be realised anywhere along the front-back axis (see re-write rule I). Only in very careful and slow speech is /A/ like R.P. /ɑ:/; in spontaneous speech, i.e. moments of excitement or emphasis /A/ is generally realised as [ɑ]. Generally in most environments a more central compromise position is usual. This vowel is rarely realised in its fully retracted position because of the danger of homophony, i.e.

$$W1 \text{ darn } \begin{bmatrix} + \text{ low} \\ + \text{ front} \\ - \text{ short} \\ - \text{ round} \end{bmatrix}, W2 \text{ darn } \begin{bmatrix} + \text{ low} \\ + \text{ back} \\ - \text{ short} \\ - \text{ round} \end{bmatrix} \text{ (if fully retracted)} = W2 \text{ dawn } \begin{bmatrix} + \text{ low} \\ + \text{ back} \\ - \text{ short} \\ - \text{ round} \end{bmatrix}^1$$

/ɑ/ is almost always either [a] or [ɑ:]. Reservations as to whether it is strictly an either-or realisation are made on two examples of [a*]. The two /a/s, i.e. /a₁/ and /a₂/ in W1 are kept exclusively apart. A random combination would produce the following forms:

$$\begin{aligned} \text{t.P. /ɑ:nt/ } \begin{bmatrix} + \text{ back} \\ - \text{ short} \end{bmatrix} \text{ aunt, if re-written } \begin{bmatrix} + \text{ front} \\ - \text{ short} \end{bmatrix} &\rightarrow W1 \text{ /ɑ:nt/ aren't } \\ \text{t.P. /lɑ:st/ } \begin{bmatrix} + \text{ back} \\ - \text{ short} \end{bmatrix} \text{ last, if re-written } \begin{bmatrix} + \text{ back} \\ + \text{ short} \end{bmatrix} &\rightarrow W1 \text{ /lɒst/ lost } \end{aligned}$$

The role played by homophony is self-evident.

/U/ symbolises the most widespread allophonic scatter, because three features are undergoing modification at the same time (see re-write rule V). While it may sometimes be realised as [u], the high vowel may be unrounded,

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1. Sample sentences with R.P. /ɑ:/ and /ɔ:/ and W.G. /ɑ:/ and /ɒ:/ in an identical context, presented in a random fashion to W1 proved his difficulty in distinguishing R.P. /ɑ:/ and W.G. /ɒ:/. In most cases he was not sure what he had heard. The sentence used was: They shot four
far

slightly lowered and centralised [ɤ̥]; lowered, centralised with lip-rounding [ɤ̞]; or unrounded, centralised and be almost half open [ɤ̞]. But it will never be realised as low as R.P. /ʌ/ which is identified by W.G. speakers as W /a/.

A comparison of R.P. /ʌ/

+ low
- front
- back
+ short
- round

 and W.G. /a/

+ low
+ front
+ short
- round

shows that the difference consists of one distinctive feature only, viz. front versus central. This is also the case in R.P. where this distinction functions successfully. However in the low front-central region W.G. has only one short vowel which has therefore a correspondingly larger domain¹. A compromise mid, central position is therefore favoured by W1 to distinguish bug /bæg/ from bag /bag/. In careful speech /u/ is usually realised as [ə] whereas [u] generally occurs more often in spontaneous speech.

-
1. Sample sentences with R.P. /ʌ/, /æ/ and W.G. /a/, /u/ in an identical context, presented in a random fashion to W1, proved his ability to identify /æ/ and /u/, but he was often unsure of /ʌ/, hesitating between R.P. /ʌ/ and W.G. /a/. The sentence used was:
He lost his cup . For him /ʌ/ falls within a direct margin of security (as defined by A. Martinet, Economie des changements phonétiques. Bern, 1955, 2.11), separating two phonemes: hence the additional distinctive feature of mid as opposed to low,

[ə]	<table border="1" style="display: inline-table; vertical-align: middle;"> <tr><td>- high</td></tr> <tr><td>- low</td></tr> <tr><td>- back</td></tr> <tr><td>- front</td></tr> </table>	- high	- low	- back	- front	versus	/ʌ/	<table border="1" style="display: inline-table; vertical-align: middle;"> <tr><td>+ low</td></tr> <tr><td>- back</td></tr> <tr><td>- front</td></tr> </table>	+ low	- back	- front
- high											
- low											
- back											
- front											
+ low											
- back											
- front											

As mentioned before the discussion of diphthongs, especially the alternation of R.P. /ei/, W.G. /e:/ and R.P. /ou/, W.G. /o:/, was postponed since a specification in terms of distinctive feature matrices as in the elaborated diasystem on page 66, would have been too cumbersome because of the complex nature of the diphthongs and therefore self-defeating, quite apart from the difficulty of trying to write rules like those on page 67. Within the framework set up by Chomsky and Halle all diphthongs in English can be derived from underlying tense monophthongs by an ordered series of rules which add, modify and delete distinctive features in the process of mapping the underlying phonetic representations into the surface structure¹. In many cases the rules formulate attested historical processes and their subsequent exemplification in the descriptions of four different dialects in diachronic sequence makes a similar application to my own data a tempting prospect. If the phonological rules² are valid they should specify the relationships

1. The Sound Pattern of English. New York, 1968. Ch. 4.4

2. Chomsky and Halle. The Sound Pattern of English. New York, 1968. Ch. 5.2.

holding between the above two diphthongs in R.P. and W.G. My presentation for economy reasons makes no reference to laxing rules.

(a) R.P. /ou/ and W.G. /o:/'

\bar{o}	\bar{o} underlying representation
\bar{o}	\bar{o} vowel shift rule (33) SPE
\bar{ow}	diphthongization rule (31) SPE

By delaying the application of the diphthongization rule until after the vowel shift instead of before as in SPE, the relationship between R.P. and W.G. can be simply stated: R.P. has one more rule in its phonological component, i.e. (31)¹.

(b) R.P. /ei/ and W.G. /e:/'

\bar{ae}	\bar{ae} underlying representation
\bar{e}	\bar{e} vowel shift rule (33) SPE
\bar{ey}	\bar{ey} diphthongization rule (31) SPE
$y\bar{e}y$	pre-vocalic y-glide ² .

1. My attention was first drawn to this during a lecture given by Professor J.D. Mc Cawley at University College, London on Nov. 27, 1969, entitled The Underlying Vowel System of English.

2. The pre-vocalic y-glide rule differs in status from the preceding three phonological rules in that it is purely a phonetic realization rule.

In this case W.G. has a pre-vocalic y-glide, a rule to be written as follows:

$$\phi \rightarrow y \left/ \begin{array}{l} \text{+ tense} \\ \text{- round} \\ \text{- high} \\ \text{- low} \\ \text{+ front} \end{array} \right] 1$$

From the above analysis the modifications entailed in moving towards R.P. by a W.G. speaker would be the addition of one rule in the case of (a) and the deletion of one rule in the case of (b). By using transformational methods of statement our description is both explicit and concise.

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1. It seems more acceptable to analyse this diphthong which is phonetically [ie̞] as ē preceded by a y-glide instead of postulating double application of the vowel shift rule to produce ī which would then be diphthongised to īe, a phenomenon which does not appear anywhere else in the derivation of English diphthongs. The extra rule for W.G. cannot be related in any way to the glide vocalization rule (32) because that prevented vowel shift and is essentially a very early rule, not a late one. I have therefore not used the name glide vocalization, but pre-vocalic y-glide because this is a convenient term initially introduced by Chomsky and Halle in this connection, see page 192, SPE.

A further justification for generating diphthongal correspondences between R.P. and W.G. is the elegant and economic way in which all diphthongs in the two dialects can be related. On the basis of Chomsky and Halle's derivational table this W.G. counterpart can be formulated:

1.	\bar{i}	\bar{e}	$\bar{æ}$	\bar{u}	\bar{o}	$\bar{ɔ}$	underlying representations
2.	\bar{e}	\bar{i}		\bar{o}	\bar{u}		vowel shift 1
3.	$\bar{æ}$		\bar{e}	$\bar{ɔ}$		\bar{o}	vowel shift 2
4.	$\bar{æy}$	\bar{iy}	\bar{ey}	$\bar{ɔw}$	\bar{uw}		diphthongization
5.	\bar{ay}			\bar{aw}			other rules ¹
			$y\bar{e}y$				pre-vocalic y-glide
<hr/>							
	\bar{ay}	\bar{iy}	$y\bar{e}y$	\bar{aw}	\bar{uw}	\bar{o}	final W.G. representation

Because W.G. did not undergo the phonemic split which produced Modern English /u/ and /ʌ/ from Middle English /u/² the bottom part of the last bracket (rule (63) pg.203 SPE) could be omitted from the vowel shift rule (33), giving further

1. SPE rule (35)

2. O. Jespersen. A Modern English Grammar. Heidelberg, 1909. Chapter 11.6.

credence to the underlying system postulated to account for the development of the vowel system of Modern English.

In the cases of (a) and (b), page 73 W1 has a closing diphthong. The pre-vocalic y-glide is not present in the front diphthong but the starting point is much closer than in R.P. /ei/. The actual range of movement is very small, not easily discernable by ear, but segmentation proves that the i-colouring begins half-way through. In R.P. and W1 the timing is different: in R.P. the second element containing the glide follows sharply after the onset of voice, in fact it would be more accurate to talk of a long glide rather than two diphthongal elements, but in W1 there is initially a steady state vowel with a relatively abrupt transition in the second element. Since there is some variation as to the degree of openness in the first element, the complex is symbolised by the variable E. W2/o:/ is diphthongized by W1, but, as is again shown by segmentation, the movement is very small, there is an initial steady state element and the u-colouring is not so strong as the i-colouring in E. Possibly this is due to the fact that in W1 /e:/ is phonetically a diphthong and the speaker is kinaesthetically conscious of movement, but monophthongal /o:/ influence has a

restricting effect on the degree to which W1 is able to diphthongise his own counterpart. Because there is variation in lip-rounding and in advancement which makes the diphthong sound sometimes closer and sometimes more open, it is symbolised by the variable O. This results in the following diasystem for W1, W2, and R.P.

W1, W2, R.P.	/	i: ~ i ~ e ~	R.P. æ		~	R.P. a:		~
			<u>W1/a₁ ~ d/</u>			<u>W1 A</u>		
			<u>W2 a₁, a₂</u>			<u>W2 a:</u>		
		ə: ~ ɒ ~	R.P. ɔ:		~	R.P. /ʌ ~ u/		~
			<u>W1 ɒ:</u>			<u>W1 U</u>		
			<u>W2 ɒ:</u>			<u>W2 u</u>		
		u: ~ ai ~	R.P. ei		~ oi ~ au ~	R.P. ou		/
			<u>W1 E</u>			<u>W1 O</u>		
			<u>W2 e:</u>			<u>W2 o:</u>		

Before any discussion of O, A, U, E and O it would be profitable to examine all W1's phonemes to isolate those which, phonetically speaking could be modified in the direction of R.P., but in fact have not been modified. These are /a₁/, /ɒ:/ and /ə:/ . The explanation for this involves analysis both of the factors operating within the structure of W1's speech to preserve phonemic balance,

which are therefore highly resistant to the external pressures already demonstrated, and those factors operating within the W.G. community.

/a₁/ cannot be raised to /æ/ because of possible merger with /e/. Even if raised a little, with compensatory lengthening as in R.P. serving as an additional distinctive feature, (e.g. R.P. /e/, /æ/ (bed, bad) c.f. /i:/, /i/ (bead, bid)) there would be homophonic clash as in [bæ:d, ba:d] (bad, barred). Any centralised retraction would produce confusion between W1 /a/ and R.P. /ʌ/ (see footnote 1, pg.71). The positional mobility and qualitative change potential of this phoneme is nil.

/ɒ:/ (see rule III, pg.67) cannot be fully rounded because of reasons stemming this time from the wider linguistic context. If W1 /ɒ:/ is re-written [+round] only one distinctive feature viz. height would distinguish it from W2 /o:/

e.g. W1 <u>caught</u>	$\left[\begin{array}{l} + \text{ low} \\ + \text{ back} \\ - \text{ short} \\ + \text{ round} \end{array} \right]$	versus W2 <u>coat</u>	$\left[\begin{array}{l} - \text{ high} \\ - \text{ low} \\ + \text{ back} \\ - \text{ short} \\ + \text{ round} \end{array} \right]$
(if rounded)			

/ə:/ (see rule II, pg.67) is the only long central vowel, so the presence or absence of [+ round] is a redundant feature. Wl therefore feels intuitively that it is the same as R.P. /ə:/, hence no change. The conclusions to be drawn are that external factors are most successful when the internal conditions of a system permit it.

As Q, A, U, are all areas of phonemic indeterminacy one way well ask with justification what they are doing in a phonemic presentation. At this point I can do no better than to quote at length from Moulton's paper on Swiss dialects¹ when he discusses phonemic indeterminacy:

"This concept is hardly new, and yet it is seldom if ever used in phonemic descriptions. Perhaps the reason is that it seems to conflict with the basic tenet of phonemic theory that phonemes are discrete, non-overlapping elements. To admit

1. Word 16, 1960: The Short Vowel Systems of Northern Switzerland, pp. 155-182.

that one cannot decide whether A and B constitute one phoneme or two would seem to cast reflections on one's ability as an analyst. Fortunately, dialect study furnishes the theoretical underpinning needed to make phonemic indeterminacy respectable. Phonemic indeterminacy can be admitted if it can be shown that the speech under analysis is at a point of (temporal and/or spatial and/or social) transition from one structure to another¹.

Furthermore on the interdependence of diachrony and synchrony he comments:

"Synchronic phonemics assumes that phonemes are discrete, non-overlapping elements, and that the transitions from one phonemic system to another must therefore be completely sharp. Diachronic phonemics, on the other hand, assumes that during the course of time one phoneme can split into two, or two coalesce into one, and every such change implies a period of phonemic indeterminacy in part of the system. Dialect phonemics, it seems, must

1. Zürich is described as an area where /i ü u/ and /I Ü U/ are not consistently opposed.

make both assumptions. On the one hand it must seek a synchronic analysis which will reveal such completely sharp transitions from one system to another as those which we have seen thus far. And on the other hand, like diachronic phonemics, it must allow for gradual transitions with resulting phonemic indeterminacies."

The next question is whether Wl's idiolect should be considered a case of dialect mixture¹ or co-existent phonemic systems² or a totally new system. How far does dialect have to be 'mixed' before the differences operating within it are sufficiently neutralised to allow its description as a homogeneous whole? I would not like to call Wl a case of dialect mixture, because that expression implies a situation where two different dialects of disparate geographical origin are spoken within the same speech community³. This does not apply here

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1. A.A. Hill, Language 12, 1936: Phonetic and phonemic change, pp. 15-22.
 2. C. Fries and K.L. Pike, Language 25, 1949: Co-existent Phonemic Systems, pp. 29-50
 3. W.F. Leopold, Word 15, 1959: The decline of German dialects, pp. 130-153.

here (see appendix A). If W1 is a transition area in the sense of Moulton's definition, then it could be described as a patois of the two systems flanking it¹. But still that just gives it another name. By its essential difference from both W2 and R.P. has it not attained a separate existence, and should not its structural ambivalence be regarded as an inherent part of its own system, if not its most outstanding characteristic? Pike's inclusion² into 'co-existent systems' of cases of "a vernacular with relics or advance elements of linguistic change" might appear very apt when we consider the very few times R.P. /ʌ/ and /ɑ:/ is realised in W1 as /u/ and /a:/ respectively, similarly R.P. /ɑ:/ was recorded only infrequently in W1³. Nevertheless that

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1. G. Francescato, 9 ICL, 1962: Dialect borders and linguistic systems, pp. 109-114.
 2. O. Fries and K.L. Pike, Language 25, 1949: Co-existent Phonemic Systems, pp. 29-50.
 3. Particularly in words like afternoon, past, last, i.e. common lexical items.

only accounts for a small percentage of the corpus and leaves unresolved the crucial question of whether a receiving dialect stays within its own system of sounds and forms, when it accepts elements from another dialect, or whether it alters its system¹.

Obviously W1 has changed his system by introducing ¹¹anew phoneme /ə/, the equivalent of R.P. /ʌ/ and less regularly ɑ as /ɑ:/ which for many people has the nature of an 'interloper coming in from outside'². That his speech actually sounds more like R.P. is mostly one of phonetic interest only, since the question of incidence would seem to be crucial, e.g. R.P. won /wʌn/ → W1 won /wən/, but R.P. one /wʌn/ W1 one /wɒn/ because it belongs to a different lexical set. That W1 is a system either used or accepted, if not used, by W. speakers is confirmed by the questionnaire.

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1. H. Kurath, 9 ICL, 1962: Interrelation between regional and social dialects, pp. 135-143.
 2. I do not feel that /ɑ:/ belongs in the same way as /ə/, but that is purely a subjective opinion.

That it will be increasingly used and will spread at the expense of W.G. is to be expected in light of the factors mentioned in my opening remarks.

CHAPTER FIVE

SUPPORTING EVIDENCE

As previously mentioned the vowels of R.P., W1 and W2 were recorded in an identical context, in this case h — d, and were subjected to spectrographic analysis. In this regard it would be pertinent to mention briefly the relevant criterion on the basis of which formant differences can be interpreted!¹

In the production of speech air vibrates simultaneously in two chambers, viz. the throat cavity behind the highest point of the tongue and the mouth cavity in front of the highest point of the tongue. The different sizes and shapes of the resonating cavities can be related to certain formant frequencies. These depend mostly on the following three factors: the area of maximum constriction (the tongue position in relation to the roof of the mouth and the back of the throat); the point of maximum constriction (whether the articulation is front, central or back); and the position of the lips.

1. P. Ladefoged, Elements of Acoustic Phonetics.
London, 1962. Pp. 101-105.

These factors affect the formant positions as follows:

1. In the case of the first formant (a) A high, close, front or back tongue position would appear to be related to a low first formant, whereas a low open position has a higher formant. (b) Vowels with an open central or back tongue position have a higher first formant than vowels with an open front position because the tongue is lower.
2. In the case of the second formant all the above-mentioned factors affect the formant position: (a) While a high, close front or back tongue position seems to be related to a high second formant and a low open position to a lower formant (the reverse of the case for the first formant) labialization lowers the formant considerably. (b) This results in the following basic division for English vowels: front, central and low back vowels without labialization have a comparatively high second formant, whereas mid and high back vowels which are labialised have a comparatively low second formant. (c) The length of the front cavity seems to be inversely related to the position of the second formant: the greater the cavity, the lower the formant. Both

labialization and retraction increase the length of the front cavity, labialization externally by protrusion of the lips, and retraction internally by moving back the place of the vowel articulation.

The following comments introduce the points illustrated in spectrograms on pages 95 to 102. As the circumstances under which the WL recordings were made were far from ideal, this has affected the quality of the spectrograms. Where appropriate, due reference is made back to the points above.

(a) Acoustic correlates of rules I - V, page 67Correlate of Rule I. $\boxed{+ \text{ front}} \rightarrow \boxed{+ \text{ back}}$

Spectrograms 1 and 2. W.G. /a:/ and R.P. /ɑ:/ in hard
 The higher second formant of the W.G. vowel is to be related to a front articulation, compared with the lower second formant of the R.P. vowel which is articulated at the back of the mouth. (Point 2(c)). In the case of spectrogram 2 this has resulted in a merger of the first and second formant.

Spectrogram 3 shows W1 /A/ where the two formants can be clearly distinguished, as opposed to spectrogram 2, but they are still nearer together than is the case in spectrogram 1, a situation which is to be related to a more central tongue position between the front articulation of spectrogram 1 and the back articulation of spectrogram 2.

Correlate of Rule II. $\boxed{+ \text{ round}} \rightarrow \boxed{- \text{ round}}$

Spectrograms 4 and 5. W.G. /ə:/ and R.P. /ɜ:/ in heard
 The lower dip in the second formant of the W.G. vowel compared with the R.P. vowel is to be related to its labialised quality (Point 2(c)).

Correlate of Rule III.

+ low	→	- high
		- low
- round	→	+ round

Spectrograms 6 and 7. W.G. /ɒ:/ and R.P. /ɔ:/ in hawed
 The higher second formant of the W.G. vowel is to be related to an unrounded articulation, compared with the very low second formant of the R.P. vowel which is heavily labialised (Point 2(b)).

Spectrogram 8 shows W1 /ɒ:/ where the two formants have not fused so completely as in spectrogram 7. The position of the second formant which is not as high as in spectrogram 6 is to be related to a labialised quality which is not as strong as in the articulation in spectrogram 7.

Correlate of Rule IV.

+ front	→	+ back
+ short	→	- short

Spectrograms 9 and 10. W.G. /a/ and R.P. /ɑ:/.
 Because the contrast W.G. /a/ and R.P. /ɑ:/ was not covered by the citation forms the examples are taken from a reading passage where W1 uses the two phonemes in free variation.

In addition to the front versus back quality as related to spectrograms 1 and 2, notice the length distinction.

<u>Correlate of Rule V:</u>	[+ high]	—	[- high - low]
	[+ back]	—	[- back - front]
	[+ round]	—	[- round]

Spectrograms 11 and 12. W.G. /u/ and R.P. /ʌ/ in Hudd
The low first formant of the W.G. vowel is to be related to its close tongue position (Point 1(a)) and the low second formant to its back, round nature (Point 2(b)).

The higher first formant of the R.P. vowel is to be related to its centralised quality (Point 1(b)) and the higher second formant to an open unrounded position (Point 2(b)).

Spectrogram 13 shows R.P. /u/ which is displayed to show the homophonous relationship of W.G. /u/ (e.g. Hudd) and R.P. /u/ (e.g. hood)

Spectrogram 14. On reading through the list of pairs W1 first read Hudd as here displayed, viz. /hud/.

Spectrogram 15. However subsequently, in a five word series of the same item, he read Hudd as /hed/. The close nature of /hed/ (see footnote 1, page 71) is illustrated by a comparison with R.P. /ə:/, see spectrogram 16, which has a lower second formant (Point 2(a)).

(b) The /ei/ and /ou/ diphthongs in W2, W1 and R.P.

(i) /ei/.

Spectrogram 17. W2 /e:/ The y-glide is shown already in the fricative articulation and by the initial sharp transition of the second formant and low position of the first formant. (Point 1(a)). The diphthongal glide is very narrow.

Spectrogram 18. R.P. /ei/. The higher first formant and lower second formant of the beginning are to be related to a more open starting point than in the articulations of spectrograms 19 and 20. (Points 1(a) and 2(a)).

Spectrograms 19 and 20. W1 /ei/. These spectrograms show variation relating to the degree of openness in the first element of the diphthong, 19 being more open than 20 (Points 1(a) and 2(a)). The higher first formant, as compared with the first formant of spectrogram 18, may well correlate with some retraction (Point 1(b)).

(ii) /ou/.

Spectrogram 21. W2 /o:/. The low first formant is to be related to a high tongue position (Point 1(a)) and the low second formant to labialisation (Point 2(b)).

Spectrogram 22. R.P. /ou/. The higher first formant and higher second formant of the beginning, as compared with the formants in spectrogram 21, are to be related to a more open (Point 1(a)), unrounded (Point 2(b)) starting point.

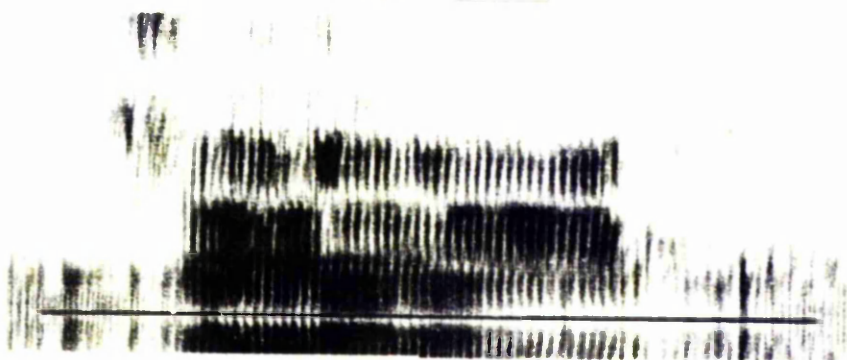
Spectrograms 23, 24, and 25. W1 /ou/. Spectrogram 23. As compared with spectrogram 22 the higher first formant may well correlate with a more retracted position (i.e. the first element is not so centralised), (Point 1(b)), as in the first formants in spectrogram 19 and 20; the lower second formant is to be related to labialisation (Point 2(b)).

Spectrograms 24 and 25 show a difference in the height of both the first and second formants, 24 having them both higher than 25. The higher first formant of 24 could be related either to greater versus less advancement (24 being less advanced) (Point 1(b)) or degree of tongue height (25 being more close), (Point 1(a)). The latter seems less likely on consideration of the second formant which in 25 is lower, a fact which is probably to be related to a labialised quality which is not so prominent in 24. (Point 2 (b)).

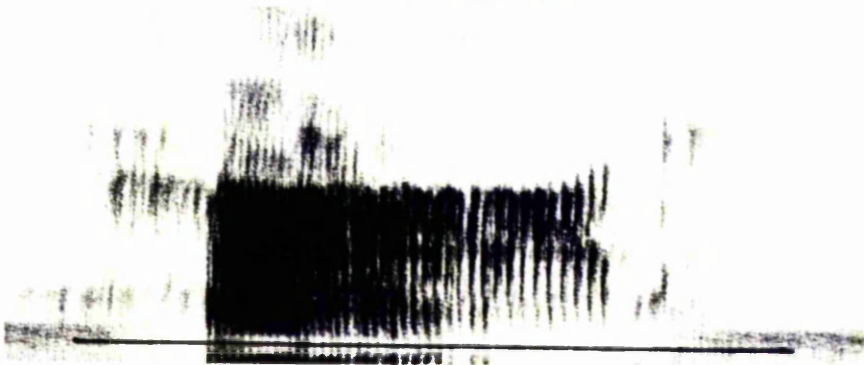
(c) The variable A.

Spectrograms 26 and 27 which were taken from a reading passage demonstrate the two possible polar extremes, [a:] and [a:]. Different phonetic realisations of the other variables have already been given, see Q (spectrograms 9 and 10) U (spectrograms 14 and 15) and the discussion of the diphthongs.

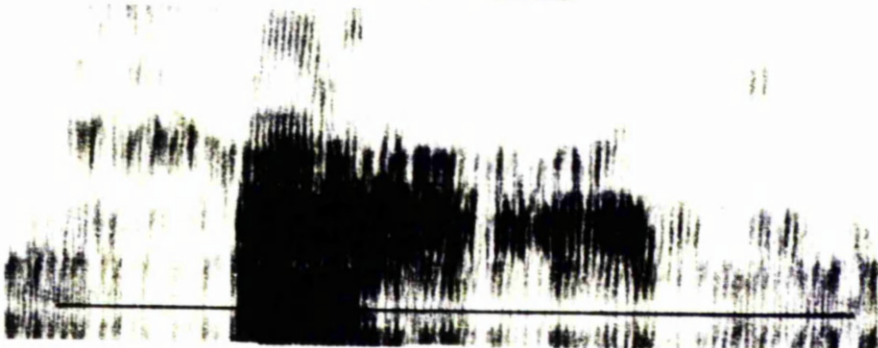
1. W.G. 'hard'



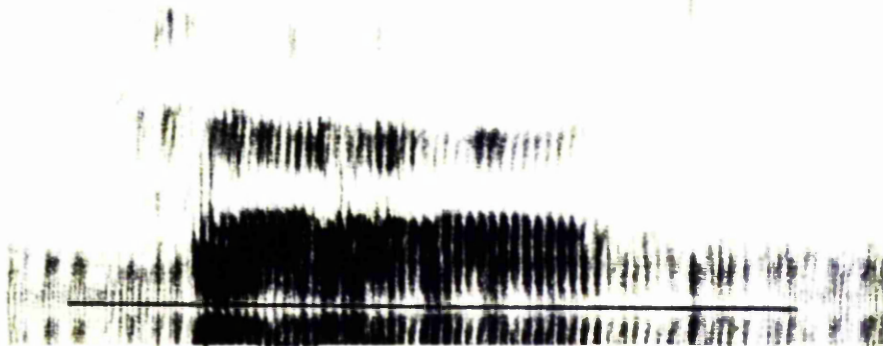
2. R.P. 'hard'



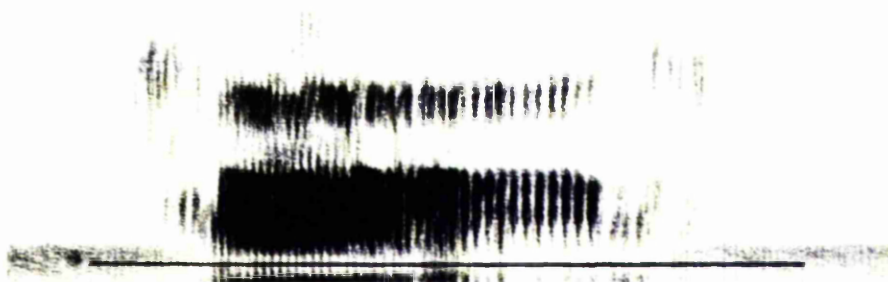
3. W.1. 'hard'



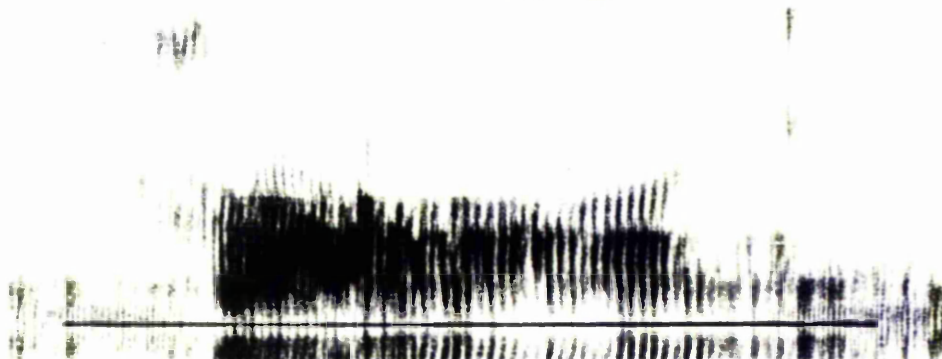
4. W.G. 'heard'



5. R.P. 'heard'



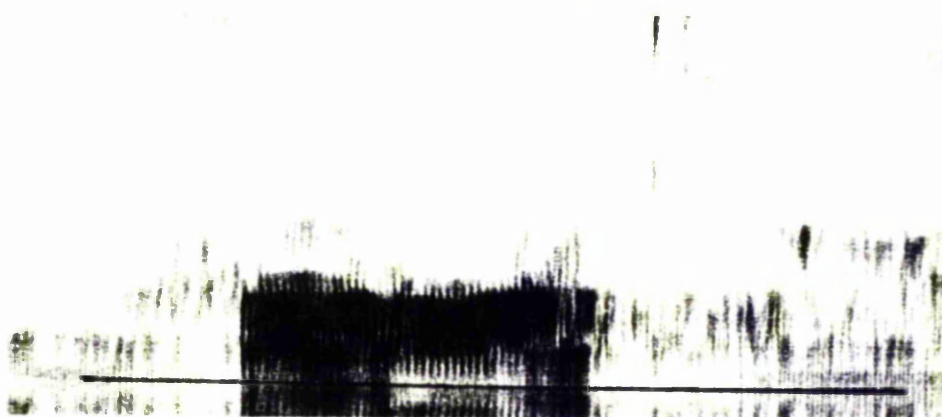
6. W.G. 'hawed'

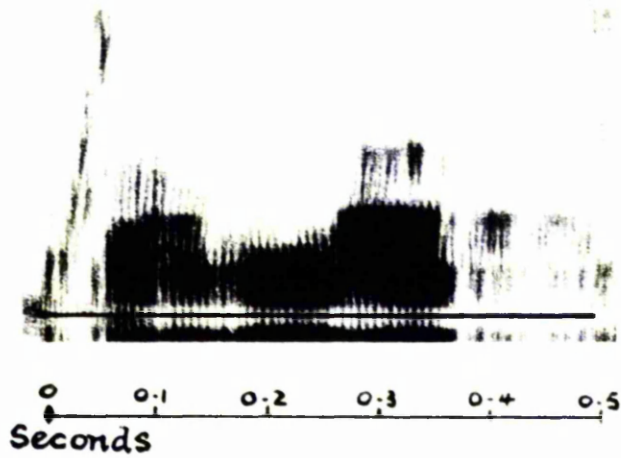
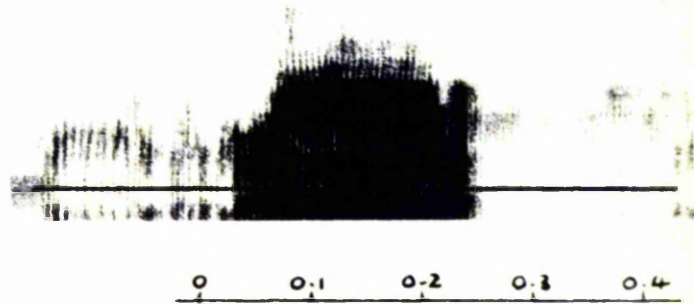
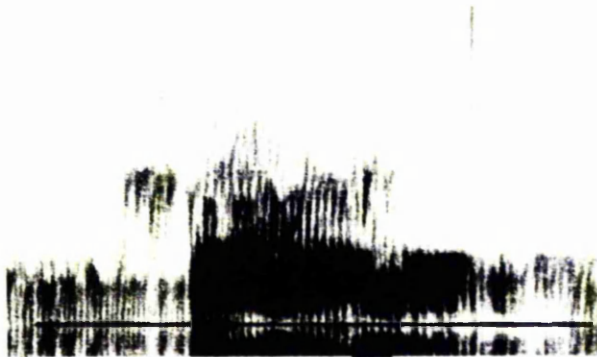
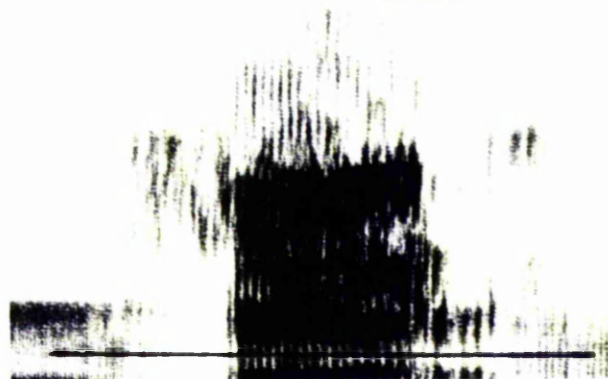
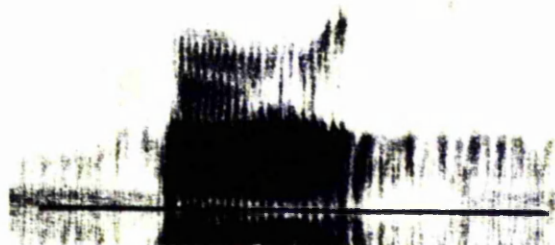


7. R.P. 'hawed'

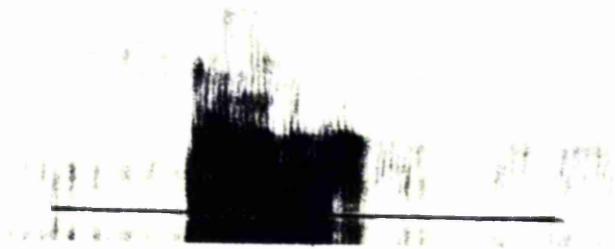


8. W.1. 'hawed'

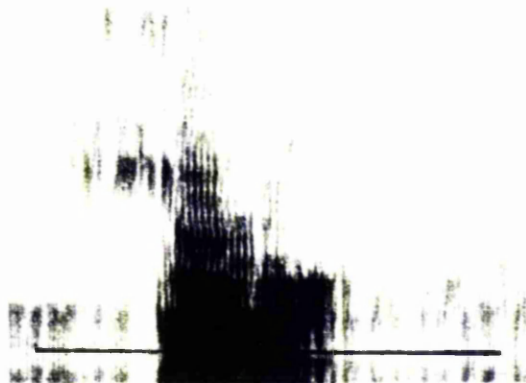


9. W.1. 'last'10. W.1. 'last'11. W.G. 'Hudd'12. R.P. 'Hudd'13. R.P. 'hood'

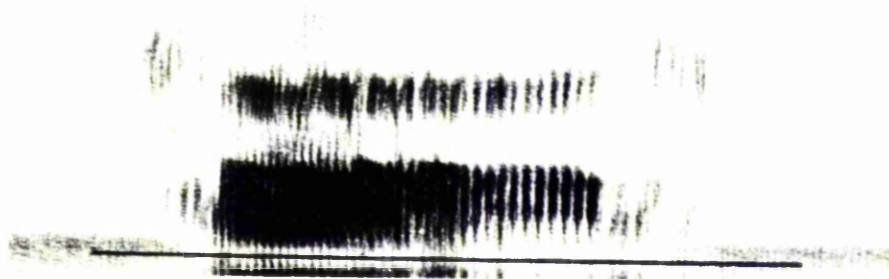
99
14. W.1. 'Hudd'

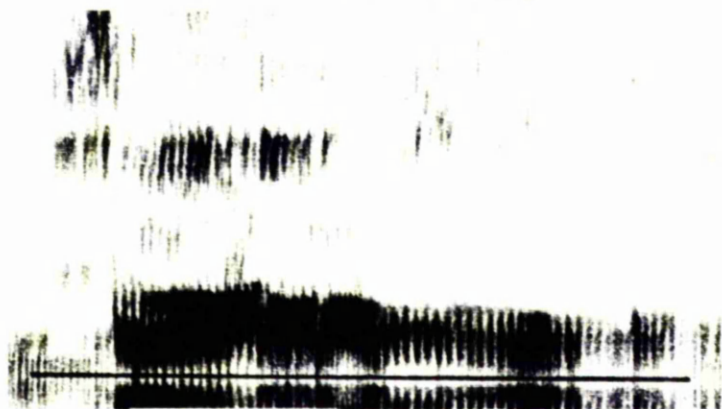
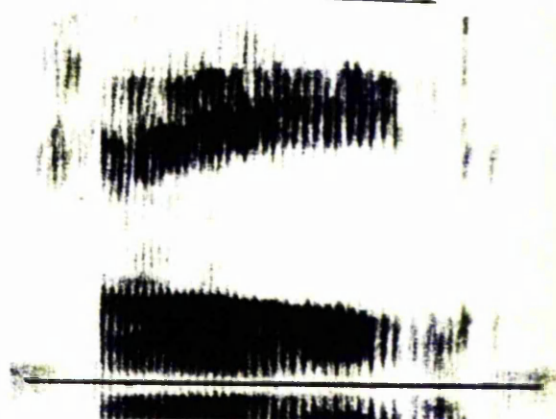
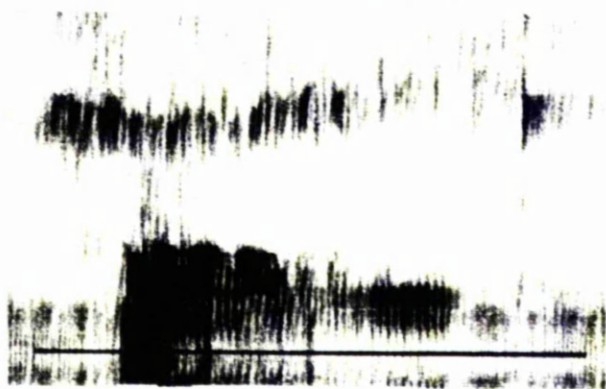
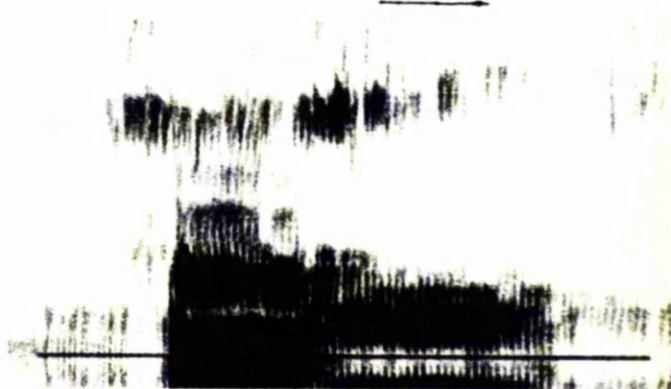


15. W.1. 'Hudd'

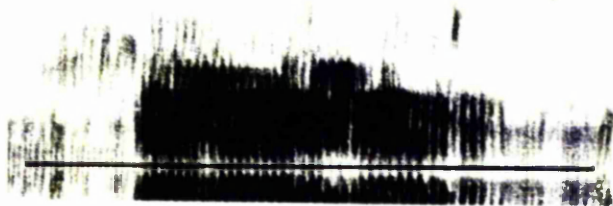


16. R.P. 'heard'

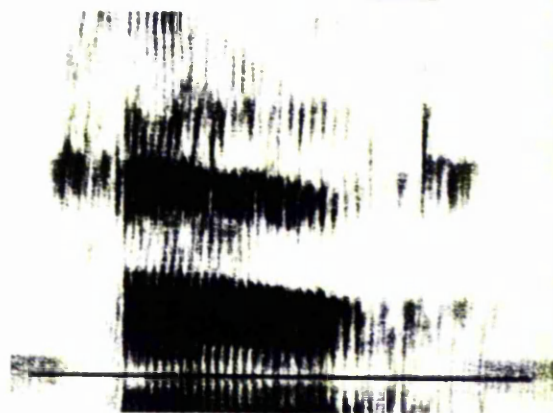


17. W.G. 'hayed'18. R.P. 'hayed'19. W.1. 'hayed'20. W.1. 'hayed'

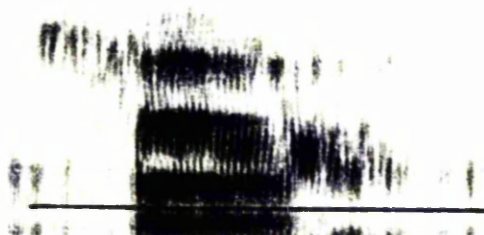
21. W.G. 'hoed'



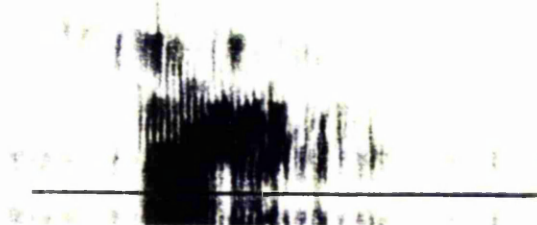
22. R.P. 'hoed'



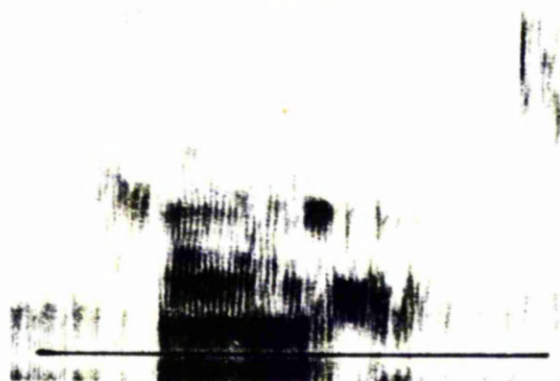
23. W.1. 'hoed'



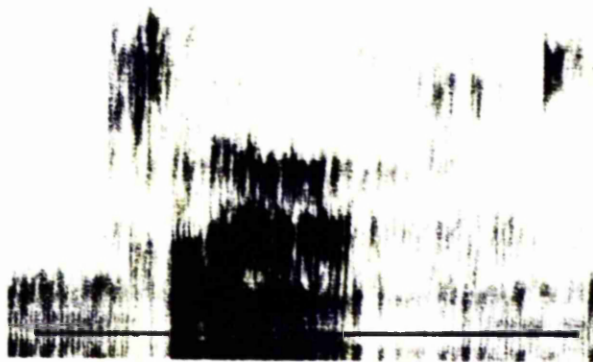
24. 'hoed'



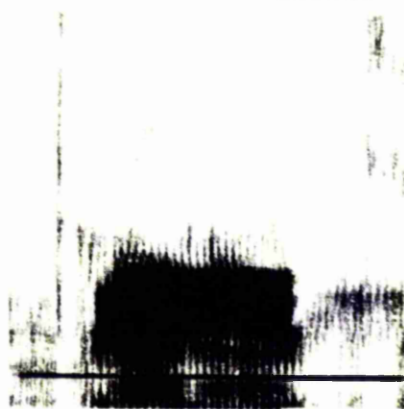
25. 'hoed'



26. W.1. 'clerk'



27. W.1. 'part'



To supplement the analysis of the citation forms the following passage in conventional orthography is included to illustrate W1's reading style. For the five variables, underlined in the orthography and indicated phonetically, the following symbols were found to be necessary. In this regard I am following the recommended practice of the IPA:¹

A : a: , ä: , ǣ: , ɑ:

Q: a , a' , ɑ:

U : ʊ , ə

E : ei , ɛi

O : ou , ɔu

In the case of the two diphthongs the more open realisation represents simultaneously a wider area of transition and a second element which is longer in duration, both combining to make the sound more 'diphthongal' in nature.

A tape recording of this passage read by both W1 and W2 is submitted as part of this thesis.

1. The Principles of the International Phonetic Association, London 1949. Page 16.

. Main Informant.

Work on the new town centre should start [ä:] in May [ei]. For several weeks contractors, bulldozers [ou] have been levelling a part [ä:] of Workington town centre, although [ou] members of the Borough [ə] Council still do not know [ou] how much [ə] its redevelopment would cost. In a special interview with a Times and Star [ä:] reporter this week Alderman James [ei] Askew [a], Chairman of the Council's Planning and Redevelopment Committee, denied criticism that demolition of the, of the houses, an hotel [ou] and school for which the Council had paid [ei] about two hundred [ə] thousand pounds had been carried out prematurely. The area involved is two hundred [ə] and twenty four acres [ei], no [ə], 2.24 acres [ei] - damn those [ou] dots - bounded by Pow St., Jane [ei] St., Central Square, John St., and the Cleator and Workington railway [ei, ei] line, and forms phase [ei] one of the Town's Centre Redevelopment Scheme. The Council's engaged [ei] a firm of property developers, Ravenseft [ei] Properties Ltd., to carry out the scheme, but at last [a:] week's Council meeting there was anxiety that the work had begun [ə] without any financial agreement being concluded. This phase [ei] proposed [ou] the erection of over [ou] thirty shops. Alderman Askew [a•] who was absent from last [a] week's meeting told [ou] the

Times and Star [ä:] reporter that he expected a financial agreement with Ravenseft [ei] Properties would be reached shortly, but he declined to be more specific. He added however: "I have no [qu] grounds for thinking otherwise [ə] than that a satisfactory agreement will be reached in view of the present goodwill which exists with the company [ə] and the keen interest they [ei] have shown [ou]" - That doesn't [u] seem to be a very good statement [ei] does [u] it? -

Negotiations [qu, ei] are moving to a close [qu] and the Borough [ə] Treasurer reported to the last [a] meeting of the Planning Committee that he was quite satisfied the way [ei] things were going [ou]. Asksed [ä:] for some indication [ei] of the eventual cost to the town and if the shops could be let at a figure which traders [ei] could afford, Alderman Askew [a] said, the financial responsibility for the building, the shops lies with Ravenseft [ei] Properties and at this stage [ei] I cannot speak on their behalf [ä:] and say [ei] what the overall [ou] cost of the building will be. The Council will have no [ou] financial outlay [ei] in the building and the letting of the new shops. Alderman Askew [ä:] said that he was not in a position to say [ei] how many shops had been let and this was a matter entirely for the Development Company [ə]. He had, he, he added, however - blast [ä:] that aspirate [ei],

instead of dropping it I put it there, didn't I -
Alderman Askew [a•] said that he was not in a position
to say [ei] how many shops had been let; this was a
matter entirely for the Development Company [ə]. He
added however that several enquiries had been received
by the Town Clerk [a:].

CHAPTER SIX

C O N C L U S I O N

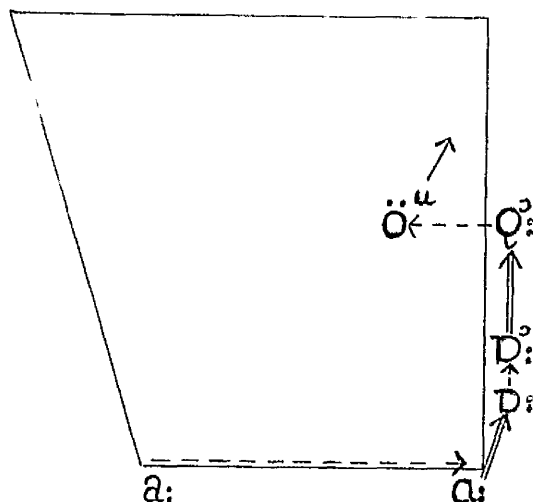
"In linguistic interference, the problem of major interest is the interplay of structural and non-structural factors that promote or impede such interference"¹.

Structural factors entail inter alia the maintenance of phonemic balance which preserves the necessary distance or difference between phonemes so that they cannot be confused with each other. According to Martinet, a change in one element of the system can disrupt this harmony and a chain reaction may be precipitated².

In the case of Wl it is quite possible to talk of a kind of chain reaction, a series of small-scale modifications which, viewed individually, may appear of little significance, but collectively present a convincing picture of changing phonemic domains. It does not seem necessary to postulate, as does Martinet, that a change in one part of the system is necessary before further changes take place, rather it is more acceptable, in light of the facts

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1. U. Weinreich. Languages in Contact, New York, 1953. Page 5.
 2. A. Martinet. Economie des changements phonétiques, Bern, 1955. 2.17 and 2.18.

given in preceding chapters, to assume that these processes are going on simultaneously. Rather crudely put in Wl's speech, the long, front, open W.G. /a:/ vowel has been retracted, the long, back, open W.G. /o:/ vowel has been rounded, and the long, mid, back rounded W.G. /o:/ vowel has been diphthongized. This can be presented diagrammatically as follows:



- - - - - ➤ means 'approximates its quality to'
 —————➔ means 'brings pressure to bear on'

This could just as easily have been plotted in reverse with the diphthong /ou/ 'pulling' the other vowels back and up higher in the mouth. These changes are interdependent and mutually conditioning, since the vowel differences

involved must be made consistently in order to prevent homonymic clash. Where two phonemes maintain a distinctive opposition in many lexical items in common use their functional load is high¹. The possibility of eventual phonemic merger of two similar phonemes with a high functional load would seem to be comparatively small and would probably have basic repercussions elsewhere in the language, for example in the lexicon².

Structural pressure and maintenance of oppositions cannot entirely explain the appearance of new phonemes in a language where there was no previous question of phonemic imbalance. W1 has introduced two new phonemes into his speech, viz. /ə/ and /ɑ:/, which W2 does not use. As this change is not structurally determined, it seems difficult to reconcile the effort needed to make these new distinctions (W1 does not always succeed) both with Martinet's philosophy of economy and Zipf's principle of least effort³.

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1. A. Martinet. Economie des changements phonétiques, Bern, 1955. 2.22.
 2. A. Meillet. La méthode comparative en linguistique historique, Oslo, 1925. Pp. 69-70.
 3. A. Martinet. Ibid. 4.
G.K. Zipf. Human Behaviour and the Principle of Least Effort, New York, 1949. Chapter 1,3.

An examination of the social matrix within which W1 operates reveals the non-structural factors which promote interference. W1 has modified his speech because of the prestigious position R.P. enjoys, but this has not alienated him from his own community by creating a kind of linguistic barrier, which point raises the question of linguistic allegiance. Linguistic allegiance is to be closely related to social class, for a fundamental change in speech habits means that a member of a group no longer 'belongs' in the same way as before because his identification as a member of that group has more or less disappeared. W1 has successfully compromised on this issue: a greater degree of modification would label him as a non-Workington man. However the reaction to a greater degree of modification might be different in the space of three more generations.

During the presentation of my data I applied different kinds of analysis according to the particular points I wished to elucidate. I had no hesitation in drawing on factors ranging over historical linguistics, psycho-linguistics and traditional dialectology to general linguistic theory (the phoneme, distinctive feature analysis and generative phonology) and acoustic phonetics. The varying methods of description are those which lent themselves most easily to

the material directly under investigation: although the different theoretical approaches are each bound to a particular viewpoint, together they enable a comprehensive statement to be made which illustrates the various facets observable in the same set of data.

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APPENDIX A. RESPONSES TO THE QUESTIONNAIRE

1. Population details.

Total: 142 (M 66, F 76)

Age range:	13 yrs. old	46	(M 22, F 24)
	16 - 20 yrs. old	86	(M 41, F 45)
	20 + yrs. old	10	(M 3, F 7)

2. Question 7

(a)	W1	more typical W speaker	56
(b)	W2	more typical W speaker	68
(c)	Both	the same	18
			<hr/>
	Total		142

3. Question 6

	W1	W2
Very typical	73	77
Not so typical	63	54
Not like a W speaker at all	6	11
	<hr/>	<hr/>
	142	142

Observations

1. W1 & W2 both identified as very typical on 25 answers
2. W1 & W2 both identified as not so typical on 13 answers
3. Of these 38, 12 belong to 7(c)

4. Question 2

	W1	W2
Workington	81	97
Local	55	37
Distant	6	8
	<hr/> 142	<hr/> 142

Observations

1. W1 & W2 both classed as Workington on 54 answers
2. W1 & W2 both classed as local on 11 answers
3. Of these 65, 18 belong to 7 (c)

5. Question 3 The first and last possibilities on each line represent polar extremes, the two central columns the expected norm.

	W1	W2
1st column	99	40
2nd & 3rd columns	453	501
4th column	16	27
Total	<hr/> 568	<hr/> 568

<u>Further breakdown:</u>	1st column	99:	(a) 21	40:	(a) 11
			(b) 18		(b) 13
			(c) 51		(c) 15
			(d) 9		(d) 1
	4th column	16:	(a) 3	27:	(a) 8
			(b) 4		(b) 7
			(c) 3		(c) 8
			(d) 6		(d) 4

Observations

In the first column (c) unclear was marked for W1 51 times and for W2 15 times. The explanation for this, especially in the former case, cannot be totally disassociated from the quality and nature of the tapes played. The frequent changes of speed and pitch characteristic of spontaneous speech make unaccustomed demands on the hearer in a large classroom.

6. Question 4

	W1	W2
Teacher, lawyer, doctor	1	10
Shopkeeper, clerk	25	69
Factory worker, labourer	<u>116</u>	<u>63</u>
	142	142

Observations

1. W1 & W2 both identified as shopkeeper, etc. on 4 answers
2. W1 & W2 both identified as factory worker etc. on 44 "
3. Of these 48, 12 belong to 7 (c)

7. Question 5

	W1	W2
Under 50	35	24
Over 50	<u>107</u>	<u>118</u>
	142	142

Observations

1. W1 & W2 both identified as over 50 on 85 answers
2. W1 & W2 both identified as under 50 on 2 answers
3. Of these 87, 15 belong to 7(c)

8. Question 8 Comments of interest.

<p>W1 1. First one has tried to acquire a different "a" sound more so than second (F 70)</p>	<p>W2 Natural Workentonian (M13) Good Workington speech without any airs (M 29)</p>
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2. 'ay' vowel not
Cumbrian, acquired (F 50)

SONAGRAPH GRID

FREQUENCY IN HERTZ

125 7K .5 6K .5 5K .5 4K .5 3K .5 2K .5 1K 750 500 250

TIME in 0.1 SECONDS

